

TQM Volume-2

Total Quality Management in Factory Management

Introduction 2 & Cost Reduction 5

2022a Edition

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Factory Management Institute

COOPERATING TO REACH EXCELLENCE



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Date, Version-Previous & V-Next	Chapter (I..XX...)	Chapter Point.- sub-point : (Updating)

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Prologue

At this time, I would describe 3 things in TQM. One is what the meanings of "fact" and "to see a fact" are. Thus, I continue the Introduction to TQM.

In this TQM series, "to see the fact" is an essential factor for statistical quality control. However, it is difficult to see and gather the pieces of facts and we make an illusion of seeing facts. And this is the biggest barrier to seeking countermeasures for the defects.

1) To see or to know the fact

I would write this (but in a little philosophical way) so you can gain a good understanding of the TQM approach.

In the first place, TQM is one of the corporate management methods. According to the understanding of the US and Europe, the aim is not only the quality issue but also total management is involved. But please accept that my description of TQM is just a quality issue.

Now, in this column, I wrote about "What to know the facts is". Because it is essential "to know the facts" for quality analysis.

When using the typical TQM tools such as Pareto chart, Scatter diagram, Control Charts, (Flow Charts), Cause and Effect Analysis (Fishbone, Ishikawa Diagram), Histogram, Check Sheets, and also traditional statistical quality control, these are based on looking at the facts. Because these are the record of facts. However, it is difficult or almost impossible to see the facts. Why? ...When looking at a phenomenon, he or she needs to understand what it is. And when understanding, his Subjectivity enters.

Yesterday night, I saw a TV drama titled "A forensic doctor's reasoning". And in the drama, the dialogue between the professor and students was impressive. The dialogue is as next.

—I don't infer the crimes or accidents —said the professor—, but collect the pieces of facts by hearing the voice of the dead body.

What the fact is? ...In this drama, the ultimate fact is just a dead body existing. Why he died and what was the cause? ...It is not possible to know. But there are some facts such as damage to his head, Hypertrophy of the heart, etc.

—Our aim as Forensic scientists —said the professor— is to collect the pieces of facts and not to conclude these are the facts.

—But professor —the student questioned—, we will be requested to determine the cause of death.

—Don't misunderstand me —replied the professor—. Our aim is once again to listen to the voice of this dead body and collect the pieces of facts and not to determine the causes. However, it is also true that we are requested to determine it. Therefore, based on the pieces of facts, we make our reasoning like an opinion.

This drama was not a good story, but I thought the above words to be good and impressive.

Collecting pieces of facts is difficult. But we need to make effort to do it. In this TQM series, I will write the use of FMEA (Failure Mode and Effect Analysis) and FTA (Fault Tree Analysis). These are basically different from QRQC (Quick Response Quality Control).

FMEA and FTA aim to the prevention of defect occurrence. Yes, there are methods of "prevention". Therefore, these are not required facts that are past data.

For a QRQC is required the inference of causes which are based on past phenomena. We can take a countermeasure if we can find the facts. However, seeing the facts is difficult. Therefore, I use this QRQC technique for getting close to the facts.

2) The meaning of "Total".

TPM, TPS (Total Preventive Safety), or TQM, all of them begin with the word "Total". However, the implication of the "Total" of TPM and TPS or TQM is different.

If saying in a word, TPM's Total is one way Total. But in TQM's Total is both ways Total.

3) Policy Control.

When doing, for instance, an introduction of a new system or factory improvement, naturally used the method of the campaign, project activity, or special approach such as JIPM's TPM step deployment. I don't deny using all these.

And sometimes I call the above approach "a shot in the arm". Shot in the arm (camphor) is only "a shot in the arm" and hasn't the sustainable potency for fundamental treatment. Therefore, I teach basic factory management **Kata** in parallel.

Now, it is necessary to understand there is another approach. That is the "Policy Control".

I. Introduction: To see vs to know the fact.

1) A story of a company.

I have been invited by a company and was asked to make a lecture about the quality improvement activity.

After the lecture on common and ordinary contents, I suggested making a group discussion with office staff and **Production-Gemba** workers (supervisor and group leader class). The aim is to gain a deeper understanding of their quality improvement activity in their working **Gemba** by themselves. The task in the small group was to find the improvement direction of their working **Gemba**.

Then a total of 7 groups (6~7persons/one group) were established based on consideration of diversity (mixed members and departments).

The theme of the discussion was free but should be related to their concern.

Next is the example of one group that chose an issue of quality concern. Just to be sure, the composition of this group was 7 persons: 1 from Production-Gemba (Prod), 1 from HR, 1 from Accounting (AC), 1 from Engineering (E), 1 and Sales (S), 1 from Quality Assurance (QA), and 1 from General Affairs (GA).

Why do I choose this group? ...Because it was very much interesting. The most interesting ever in my experience. And in this way, I made many lectures to foreign companies. And I could learn from them each time. And this group was the best ever for me to get wisdom.

Well, please take a break and listen. They chose the theme of quality improvement.



The small group discussion

First of all, they're freely talking, but I prefer to omit it.

—But indeed, office staff don't know about the **Production-Gemba** —expressed the **Production-Gemba** worker.

—We know about the Production-Gemba because we are obliged to visit the **Gemba** at least once a week by the executive —the QA and AC members expressed—. Therefore, we know very well the production process and are learning.

—Particularly —the QA member said—, my department is obliged to analyze **Gemba** with the 3G concept (**Gemba**, **Gembutsu**, and **Genjitsu**). Therefore, we believe we know **Production-Gemba**.

All the rest of the group agreed —We know, we know, we know ... It is common sense....

Then, the HR representative who, by the way, was pregnant by 7 months intervene —You are saying “we know we know...”. But do we actually know the **Production-Gemba**? ...What is

"knowing"? —And she continued— I will ask the male members. For instance, I'm pregnant. Do you know pregnancy and childbirth?

Thus, the Male members answered —Of course, we know as common sense.

—I know, I know —repeated the HR representative—. So, do you know the pain of childbirth? ...Your knowledge is only in a video, textbook, or others, but is not by the experience or in the position of a future possibility of pregnancy. Unfortunately and of course, males can never have such an experience.

—But you are saying "we know, we know..." —The HR representative continued—. I think males and females have different feelings, even if they look at the same, for instance, in the video.

—A female who has the possibility of pregnancy and therefore learns by video or textbook and others exactly. But again —the representative of the human resources department questioned—, I think that males and females have very different feelings even looking at the same video...

—For example, let's say you watched the same video. In short, men don't want to feel the reality of childbirth. That's why even if you watch the same video, you can't make discoveries like girls, or rather you won't actively try to discover them...

—Do you know most pregnant have problems of smell from smoking, cold body from the air conditioner, etc —Asked the HR representative, and she questioned one of the Males— You are keeping the company rules and smoking outside. But your clothes itself is odor.

And she questioned a Female in the same way —You are my best friend. However, I dare to say (sorry, but...) that your eau de cologne (perfume) is too strong for a pregnant. —And she detailed— What I'm saying is that "Do we understand what is the knowing?"

—And what is "common sense"? —the HR representative asked all the members—. My opinion is that we know nothing, but just we know superficially.

Then the **Production-Gemba** worker intervened —In other words, does it mean that we voluntarily block out information about what we do not want to know?

—Girls think they might give birth, so they watch the video seriously until the end. —The Accountant representative said—. If girls replace it on their own, they will be able to feel the emotions such as the pain and joy of the pregnant woman who appears there. Therefore, they are interested in various details. On the other hand, men have the attitude of "I don't know about such things". For them, the images in front of them are nothing more than traces of their previous knowledge. In fact, it should be full of scenes and information that males don't know. But males say that we know it without seeing it.

—Everyone —The HR representative required the attention of all of the group—, do we not have the same attitude when visiting **Production-Gemba**?

—Mmm... Very honestly —the Quality Assurance admitted—. Our office staff is obliged to visit the **Production-Gemba** of our company. However, it is obliged, and it is not an autonomous attitude by ourselves. We believed that we know the **Production-Gemba**. But it may be superficial.

Then the Sales representative intervened —Last week, when I visited a customer for the treatment of the quality concern, the quality manager of this client complained about the repeated same troubles. Why it does occur the same quality problems in the same production process? ...And in this way, the Quality Assurance department told me the cause is a Human error.

—Human error? —Asked figuratively the Sales representative—. Shouldn't the truth not be a human error, but a lack of looking facts and analysis?

The Quality assurance and the Production-Genba representatives answered together hesitantly —Mhm, Mhm... We may be escaping from looking at or finding the facts.

—Therefore —the HR representative concluded—, I think we need to keep our effort to knowing facts with eliminating our assumptions and prejudices.

...

In my heart, I felt my round of applause. Thus, knowing is a judgment in the range of a person's knowledge and experience. Common sense? ...There is no such uncertain thing. Please kill this word from the world. The important suggestion in their dialogue was that we need to through away the barrier in mind when trying to look at facts. There is the word "objective, third person eyes, and eager eyes", and also the way of looking at things that are not bound by stereotypes.

Anyway, her talk changed the atmosphere of this group meeting. And after this free talking and the KJ activity was carried out to find their thought and solution, they concluded as next:

1. To keep the effort to know the working Gemba (Office and Production):_The ultimate fact has to be one, but there are many fragments of facts behind the ultimate fact.
2. Office-Gemba, also, has to be one of the parties concerned with TQM: The TQM contents of office Gemba to be office safety (including odors; all laughing), office quality, better service contents to production -Gemba, documents quality, a procedure including settlement quality, maintenance of office equipment, etc.
3. To have keen eyes to look at facts:
 - a. Keen eyes;
 - b. Variety plural eyes, suspicious eyes, curiosity eyes, and **Unome-Takanome**;
 - **Unome-Takanome**.
U: Cormorant. **Me**: eye.
U-no-me: eyes of Cormorant;
Taka; Hawk.
Taka-no-me; eyes of hawk.
 Like the eyes of a cormorant chasing a fish or a hawk searching for prey.
Unome-Takanome: It is a sight that seeks out things with a sharp look.
4. And finally, better support to **Gemba** by office TQM improvement.



Seeing facts.

As I wrote before, "facts and truth" are different. And TQM also requires seeing facts. However, to see facts is impossible, because a human being has his brain and thinking and is not like a video function or sensor. Therefore, when looking at something, the brain tries to think. At this time, unfortunately, his subjectivity enters into his mind and memory.

When looking at something by 3 people, each of the three has his own way of feeling. And, hearing is also the same. One voice was heard by 3 people, these 3 people have different thoughts. It is quite natural.

But it is necessary to effort to see facts and records. Therefore, we need to give attention to 3G (Gemba, Gembutsu, and Genjitsu) to get close to the facts.

After all, we can only understand what goes into our own brains. In other words, the difficulty of seeing the facts is our own brain. Brain? ...Yes, it is the Right hemisphere of the brain. Therefore, please train the right hemisphere of your brain.



By the way... and about the above meeting.

One member was required to record the opinions faithfully on a whiteboard. Yes, faithfully in spoken language.

When doing a meeting, there is a meeting rule. It is simple:

- *Spoken concise and clear;*
- *Careful listening to each other;*
- *In polite word (no rudeness);*
- *All persons are inequality (no carrier, no class).*

Seeing facts is indeed difficult. But it is possible to collect the pieces of facts by not only the human eyes but also devices (sensors, cameras, edge computing, etc.)

Defects occurred. It is original fact. And it is required to find the causes. And in the process of cause analysis, it is required to see the pieces of facts. Based on this, our wisdom can imagine and determine the nearest true cause.

People are not uniform. Therefore, it is interesting.

When making KJ-method in order to find a conclusion, they made cards with the whiteboard memo and additional ideas, they found and added other interesting ideas.

Different understanding by individual attendees in one thing sometimes creates unexpected stories and directions.

Therefore, the KJ method is interesting. Therefore, a human being is interesting.

When doing the 5-Whys (Fishbone diagram) analysis, I use the KJ method to get close to the facts.

By the way. Above meeting. I suggested taking a photo of the whiteboard with a digital camera. The purpose is to record the nearest facts and attach them to the meeting record.

Why I'm writing this theme is that knowing the facts is essential for quality improvement. And I have seen many cases of for instance 5 Whys analysis mistakes because of the lack of "to know the facts".

II. The meaning of "Total"

Actually, this theme and the next one (III - POLICY CONTROL) is the answer to my friend who made a question about his concern. As I will write later, the penetration of actual TQM activity in **Office-Gemba** is lower than **Production-Gemba**. Then his question is how to let penetrate it in **Office-Gemba**.

To consider it, I would explain the meaning of Total. Actually, the "T" of TPM and TQM or TPS (Total Preventive Safety¹ by Eduardo L. Garcia) is different. And, I write the meaning of "total" to be the meaning of "all people's participation" anywhere.

And now, I write that the meaning of "participation" is different in TQM or TPS, and TPM.



*The Factory Management
Encyclopedia in Amazon*

1) TQM of **Office- Gemba**.

When I was writing this column, I got a request from my friend. He requested that it must be necessary to write this theme by all means, before beginning the writing of the technical theme of quality management.

This theme is about the participation of **Office-Gemba** in TQM. He, himself, also saw the difficulties of involving the administrative department in TQM (and/or TPM). And he requested I may write my experience with the involvement of (for instance) the HR department in TQM.

Involvement of HR department to TQM? ...Probably you may have doubts about why it is necessary to write now. Because many times I wrote the word "all people's (employees) participation" which is the meaning of "Total". The meaning of Total has the participation of all organizations too.

And I wrote the participation of (for instance) accounting in TPM activity. However, his concern is different and gave us a suggestion. Below, I write this theme, before starting the main theme.

Anyway, still, I'm writing an introduction. Sorry. From now, I use the case of the HR department as the representative of **Office-Gemba**.



TQM for Office-Gemba such as the HR department.

How does this department execute TQ? ...It is indeed interesting. But, Why is this theme interesting or important? ...TQM, TPS (Total Preventive Safety advocated by Eduardo L Garcia), and TPM have the word "Total".

¹ **Zero Accidents: Total Preventive Safety:** Factory Management Institute Book series.

(Spanish) La Enciclopedia de Gestion de Fábrica: <https://www.amazon.com/dp/B08RSBJMLK>

(English) The Factory Management Encyclopedia: <https://www.amazon.com/dp/B08RW89DMW>

Again, what is the meaning of "Total"? ...In somewhere, I wrote that the meaning of Total is "All people's participation". Yes, it is right. However, the means or contents of "participation" of TQM, TPS, and TPM are different.

As I write later, TQM and TPS request the HR department not only providing of services to production-Gemba but also "HR department himself improvement".

For instance, in the TPS (Total Preventive Safety): This activity is not for just **Production-Gemba**, but requests the safety improvement of the HR department of such physical accidents and also of (for instance) mental health. And it is the meaning of the improvement of the HR department itself. I think you could understand what I'm saying.

Once again, the participation of TQM or TPS means not only support for **Production-Gemba** but also requires **Office-Gemba** improvement.

A little more, I would explain it with my experiences and the universal understanding of TQM, TPM of the world.

Below I present the universal understanding of TQM and TPM comparing Wikipedia. Please agree to introduce Wikipedia to understand the world's understanding of one thing and another.



The thought of JIPM-TPM vs US-TPM in Wikipedia.

(A little long but interesting)



The thought of JIPM TPM (Total Productive Maintenance) By Japanese Wikipedia

← **QR-code** / It is an activity to continuously improve productivity and secure profits by eliminating all losses existing in the production system (this is called the ultimate pursuit of production efficiency). The concept of productive maintenance introduced in the United States to enhance productivity and economic efficiency has been expanded uniquely to Japan, and it has evolved as a production innovation activity, that is being developed on a company-wide scale. In many books, it is called

"Productive Maintenance with All Participation" and is officially referred to as Total Productive Maintenance. However, the current innovation by TPM is expected not only to improve the efficiency of manufacturing sites but also to "establish the basic conditions for the continuous prosperity of companies", and TPM itself is "a means to build a new management model". It has evolved, and many aspects should be expanded and interpreted as Total Productive Management.

The characteristics of TPM are that it focuses on "people" and "equipment" as an improvement approach to the ideal form of manufacturing (loss, zero, etc.), and that it builds a mechanism that continues to produce results in the field, in kind, and in reality. In the process of practicing TPM activities, "people change, equipment changes", and "workplaces change, factories change, companies change" to continue to produce results.

For example, in order to achieve the "zero loss" that TPM aims for, the major premise is the manifestation of loss, the classification of loss, the reduction of loss, and the prevention of the recurrence of loss (measures against latent loss). It can be said that the practice of TPM

activities is to seek and pursue the development of human resources and equipment for that purpose.

TPM is an activity in which the field is the leading role, but if the top management does not show interest, saying "because it is a field activity ...", or if the management issue and the field activity are no longer linked, it is almost certainly an activity of stagnation and retreat. Therefore, it is necessary to have a system in which top management, management supervisors, leaders, and employees can participate. It is said that the promotion of TPM by "overlapping small group activities" advocated by Likert (1903-1981, a social psychologist in the United States) for participatory management is effective.

TPM worldwide understanding by US Wikipedia QR-code→

Total Productive Maintenance (TPM) started as a method of physical asset management focused on maintaining and improving manufacturing machinery, in order to reduce the operating cost of an organization. After the PM award was created and awarded to Nippon Denso in 1971, the JIPM (Japanese Institute of Plant Maintenance), expanded it to include 8 pillars of TPM that required involvement from all areas of manufacturing in the concepts of lean Manufacturing.



TPM is designed to disseminate the responsibility for maintenance and machine performance, improving employee engagement and teamwork within management, engineering, maintenance, and operations.

1- focused Improvements 2- JH Pillar (Autonomous Maintenance) 3- PM pillar (Planned Maintenance) 4- QM pillar (Quality Maintenance) 5- DM pillar (Development Maintenance) 6- E&T pillar (Education and Training) 7- OTPM (Office TPM) 8- SHE Pillar (Safety, Health, and Environment)

Objectives

The goal of TPM is the continuous improvement of equipment effectiveness through engaging those that impact it in the small group improvement activities. Total quality management (TQM) and total productive maintenance (TPM) are considered the key operational activities of the quality management system. In order for TPM to be effective, the full support of the total workforce is required. This should result in accomplishing the goal of TPM: "Enhance the volume of the production, employee morals, and job satisfaction."

...

The main objective of TPM is to increase the Overall Equipment Effectiveness (OEE) of plant equipment. TPM addresses the causes of accelerated deterioration and production losses while creating the correct environment between operators and equipment to create ownership.

As you understand, TPM focuses on just the improvement of production-Gemba. And, it is indeed that there is the word of Office TPM in 8 pillars. But I already have written that it has no meaning and there is no way to do it.

Anyway, the meaning of Total is the support to Gemba by the function or job role of the HR department and doesn't request the HR department to improve itself.

2) Understanding of TQM

TQM comparing Japanese and US Wikipedia.

Japanese Wikipedia (From TQM-1)

The concept of TQM was first proposed in the United States in the 1980s.

...

TQC evolved uniquely in Japan into bottom-up activities represented by QC circles, which were called Japanese-style TQC.

TQM, a method of quality management based on a top-down decision-making process, was conceived to fit the American corporate culture by incorporating the "continuous kaizen (improvement)" characteristic of QC circles, a feature of Japanese-style TQC.

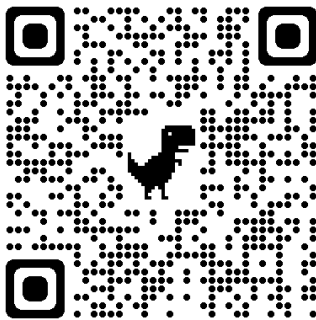
...

The characteristic feature of TQM is that the management strategy established by the top management of a company is broken down into quality targets and customer satisfaction targets, which are then deployed throughout the company.

...

Above is the general Japanese understanding of TQM.

And, Japanese TQM (TQC) aims at company-wide improvement which is involved both direct and indirect departments through such a QC Circle, small group bottom-up activities.



*TQM volume 1 - Prologue and
what is TQM*

...

The US & European understanding in Wikipedia (From TQM-1)

Total quality management (TQM) consists of organization-wide efforts to "install and make permanent climate where employees continuously improve their ability to provide on-demand products and services that customers will find of particular value". "Total" emphasizes that departments in addition to production (for example sales and marketing, accounting and finance, engineering and design) are obligated to improve their operations; "management" emphasizes that executives are obligated to actively manage quality through funding, training, staffing, and goal setting.

TQM also aims at all **Office-Gembas** improvement.

Now as you understand, the meanings of the Total of TQM, TPS, and TPM are different.

Next, once again, I would clarify the cause of why the mind of **Office-Gemba** of an overseas company is lower than production Gemba by considering the difference between TQC and TQM.



Consideration of TQC and TQM difference

Again, the concern of my friend... How to involve the administrative department in TQM and why so difficult in administrative departments?

I write the answer firstly.

- a. **Why it is so difficult? ...This is the feeling of the third party of the indirect department.**

(I introduce a story of a company later.)

- b. **The solution for such a difficult company... The solution is Policy Control by the top executive.**

(Also I detail it later.)

Now here, please accept to make a detour to explain it a little.

Why QC Circle? ...When writing TQM, I need to write QC Circle as one of the essential means. But it is true that to introduce and stabilize, it is very difficult overseas. And I thought that one of the reasons is the mind and trends of the management side.

By the way, I write this TQM series by mixing TQM and K. Ishikawa's TQC. And here, once again, I clarify the difference between TQM and Ishikawa's TQC.

TQC

TQC has 2 stages (the initial stage and the 2nd stage)

TQC (initial stage)

TQC is Company Wide Quality Control – CWQC. But it focused on the quality improvement of the **Production-Gemba**. And all departments including **Office-Gemba** were requested to participate through the “giving services” such as effects visibility by data, etc. (accounting), planning and implementation of education & training, skill evaluation & wages (HR), etc. But it is not included the quality improvement of their jobs themselves.

They think that they were not a party to quality improvement, but a third party. And the standing position of the indirect department is always "support". TQC didn't request the improvement of the HR department itself. But it was requested the participation in the **Production-Gemba** quality improvement.

The above was the initial stage of TQC, but it was gradually changed to the second stage.

TQC (second stage)

This feeling of "they are not a party to quality improvement, but the third party" was changed by the spreading of QC Circle activity.

QC Circle is one of the essential themes and means of TQC and was begun by **Production-Gemba**. And it was gradually diffused to **Office-Gemba**. And they became the interested party of TQC from the position of the third party.

Their **Kaizen** mind was changed and pursued not only the zero defect in their paper-work process but also quality improvement of support to **Production-Gemba**. And the best improvement was the increase concerning **Production-Gemba**.

Actually, I know that the above is still on the way, even though in Japan. But it is also quite true that QC-Circle of **Office-Gemba** is very popular now.

This is the story of just in Japan. When looking at the situation overseas based on my experience, the diffusion of QC-Circle which is one of the essential means of bottom-up **Kaizen** has difficulties.

Anyway, TQC also requires the improvement of the indirect department itself.

This point is already the same as TQM (which requires the effort of all departments.)



Difficulty in overseas.

I will write the detail another day, but today I make a simply description.

*One of the difficulties is not the Gemba worker, but the management side. Gemba worker generally welcomes such activity. But the management side hesitates to implement it, because of the cost, despite their enthusiastically advocating the necessity of **Kaizen**, **Kaizen**, **kaizen**, etc.*

***Kaizen** (continuous improvement) requests a cost (such as education, awards, campaign, and investment), but it is small against the total effects of **Kaizen** by all people's participation. (It is possible to affirm as above in my experience.)*

On the other hand, the effect is difficult to predict by management with numbers against the cost. Then, the priority of QC Circle becomes lower than the immediate profit. This is the issue of formulation of corporate culture rather than the difference of national character.

*Anyway, I write TQC in this TQM column and show how to formulate the corporate culture of **Kaizen**.*

TQM

On the other hand, the standing position of TQM is different from stage 1 TQC. And, it is the same to request the improvement of these indirect departments its-self. (For instance) The HR department is requested the quality improvement of his working process.

Yes, TQM requests the improvement of HR himself. Actually, TQM also requests the HR department to participate in the production-Gemba improvement by the division of duty.



Division of duty (Distribution of responsibilities)

As an example, I show the Division of duty of the HR department.

When I taught the Teaching Company², I requested the project members to make a presentation regarding departments' job responsibilities based on their "division of duty". I remember that it was the first difficulty because there wasn't documentation.

it was my surprise. However, I knew that it wasn't a rare case in small and medium companies.

And I remember that the newly established management team discussed with the mother company and made temporal ideas for their division of duty. I appreciated their very quick response about the company's base standard.

The following is the HR department's Division of duty as an example (a little modifies based on my previous company).

Division of duty.

What is it? And, What is the purpose? ...The division of duties is a system that clarifies the roles of each job. By clarifying responsibilities and authorities, we can expect the soundness of the organization, the efficiency of human resource development, and internal control.

A little more, the arrangement of division of duties regarding the "contents", "authorities", "scope of responsibility", etc. of each department, position, or a specific person in charge is called "separation of duties". Is stipulated as one of the internal rules in line with the work rules, etc., called the "Rules for Division of Duties".

In the beginning, "This rule is usually aimed at clarifying the responsibility and smooth business operation by clarifying the division of duties based on Article 〇 of the organizational rules of the company." And so on.

The larger the organization such as a company or the more complicated the business, the more conflicts of business and authority occur between each department, the confusion of the command system, and the extra effort required for coordination and negotiation. In order to avoid such situations as much as possible and facilitate organizational management, it is necessary to clarify in advance the content and authority of the work that each department/individual is in charge of.

² **Teaching company** is a series of a real story about the implementation of TPM and TQM in a medium sized company by Sensei Kimura. They are deployed throughout TPM-7 to TPM-16 and TQM-1 lectures and it continues within this TQM series. The beginning of these series is in:

- TPM-7 page 31 One Lecture in a Company [English]:
<https://archive.org/details/TPM7SeisoInJishuHozen/page/n29/mode/2up?view=theater>
- Previous lecture in TQM-1: <https://archive.org/details/tqm-1-prologue-and-what-is-tqm>
- TPM-7 page 31 Una conferencia en la Empresa [Spanish]:
<https://archive.org/details/TPM7SeisoEnJishuHozen/page/n29/mode/2up?view=theater>
- Lectura previa en: <https://archive.org/details/tqm-1-prologo-y-que-es-tqm/mode/2up>

What is the HR department? ... *The HR department is the department that manages the most important "people" among the management resources of "Financial Resources, Human Resources, Material Resources, and Intellectual Resources".*

The HR Department acquires, manages, and utilizes the human resources that support the company.

It can be said that it is the heart of a company that undertakes such things as one.

- *In the personnel department*
- *Wage system*
- *Salary increase/promotion system*
- *Relocation/transfer*
- *Welfare*

It manages various systems collectively, and it is in charge of system management and operation as well as work related to construction such as planning and modification of various systems based on business strategy.

*The indirect departments are the so-called "service departments". To whom? ...Of course, it is **Gemba** who creates the sales amount and profit.*

Therefore, service departments such as HR, Accounting, Production planning, Administration, etc. are requested to pursue a better quality of service always.

More concretely, the HR department divides the following duties:

1. *Matters concerning staffing and transfer;*
2. *Matters concerning recruitment and recruitment of employees;*
3. *Matters concerning personnel evaluation;*
4. *Matters concerning retirement;*
5. *Matters concerning education and training;*
6. *Matters concerning salary, bonus, and retirement allowance;*
7. *Matters concerning welfare;*
8. *Matters concerning social insurance.*

Please don't miss the main theme of what I'm writing... **I wish to clarify the difference between TQC and TQM.**

And why I wish to mix both in this TQM series writing do:

- I wish to clarify why the administrative department, for instance, the HR department has the attitude of "not a party to quality improvement, but the third party".
- And, I wish to suggest the way for administrative department TQM activity.

Actually, the above 2 things are the background for this theme. And as an example of an administrative department, I pick up the HR department. Of course, the method is the same for other departments.



Difference between TQC and TQM

I compare the understanding of TQM and TQC in Wikipedia. And simply I compared as below:

	Top Down	Bottom Up
TQM	○	X
TQC	○	○

Has TQC the function of both Top Down and Bottom Up? ...Yes, it has. But the form is different.

The US and European form of TQM controls all stories of, for instance, DMAIC of 6-Sigma by top management using the project of Black belt.

This is an ultimate example. What I'm saying is that the effort of Bottom-Up by **Kaizen** and such QC Circle and small group activity by autonomous employee's activity is too little.

Personally, I never say "nothing", but haven't seen such an example in foreign companies in my poor experience. I'm writing this story in July of 2022. And unfortunately, I couldn't visit foreign companies during these 3 or 4 years, because of the COVID-19 problems. During these years, the situation might have changed dramatically, and appeared many companies of good examples. But I continue this writing under the assumption of poor **Kaizen** mind establishment in foreign companies.

When comparing the US, European companies, and Japanese, it is very clear that Us & European companies take the form of "Control".

For instance, DMAIC of 6 Sigma. DMAIC by whom? ...It is a project led by Black Belt.

On the other hand, about TQC, the flow of TQC implementation is:

- The target is decided by company policy.
- Deployment to departments that are required to decide their policy and target based on the company policy.
- Deployment to concrete activities of sections and **Gembas** which include QC-Circle and Small group activities.

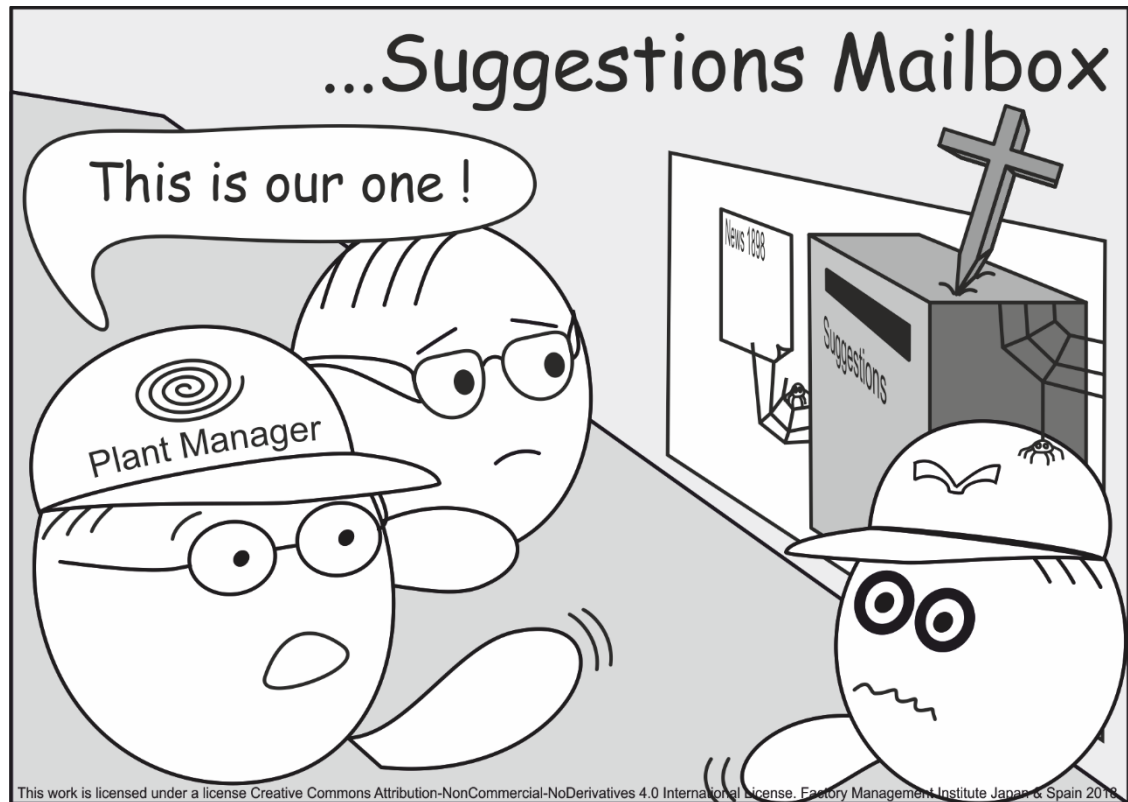
I will write the detail of the deployment of Japanese TQM later. But now I'd like to deep into the doubt of my friend...

HR department engagement in TQC

Why "not a party to quality improvement, but the third party" by the HR department?

...Please never misunderstand. I never say that US & European TQM isn't effective. It is very effective.

My friend asked me the way how to break through the situation of "not a party to quality improvement, but the third party" by the HR department. Although, TQM is companywide activity, however and according to him, the situation of "Total" is still like one way. HR department knows the importance of Total, but actually, their mind is like the third party.



Thus, in such a perspective the HR department's mind is: We can and need to support **Production-Gemba**, but we aren't in a position in which we need to improve our work by ourselves. Of course, this mind is wrong. Because they need to improve their quality of support to **Production-Gemba** by improving their work.

It is quite true that it is possible to improve the quality of supporting Gemba by improving the quality of HR work itself. But according to him, there is difficult to involve them as the interested party of TQM.

His concern is the difficulty of HR involvement. Although my concern is the difficulty of **Kaizen** or QC-Circle & small group activity diffusion. Thus, I think probably the root cause is same.

- One of the root causes is the basic factory management **Kata** was not established.
- Another is the problem of "Policy Control".

The suggestion to my friend is how to involve the HR department.

Policy Control? ...Probably your feeling is "what a strange thing Kimura is saying". Again, I saw many foreign companies. Yes, many. And, they are saying the importance of **Kaizen**. But the result is poor. When I visited a company, he had a **Kaizen** suggestion box. It was good. However, there was a discolored suggestion paper. And when I knocked on this box, a cockroach popped out. After this happened, I called this box "a cockroach box".

There are institutions in many countries that use the catchphrase of **Kaizen**. And, most foreign companies know the word **Kaizen** and its importance (?). But when looking at the situation, the diffusion in actual activity is very poor than the notability (name recognition).

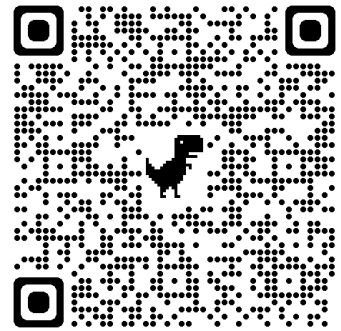
Why? What is the barrier? ...One is the **Factory Management Kata**. I believe there is no necessity to explain. And omit the detail explanation. And another is "Corporate philosophy, Strategy and Policy Control".

Corporate policy.

It is the essential tool to realize the corporate strategy which is based on corporate philosophy.

Of course, the foreign companies that I visited have this. And emphasize the importance for instance Safety, Quality, etc.

Now I believe you could understand the difference between TQC and TQM and also the difficulties of the involvement of the HR department in these.



*Factory Management, volume I
– Corporate Constitution.*



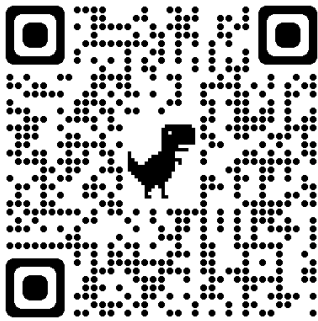
*Factory Management, volume
II – Policy Control I.*



*Factory Management, volume
III – Policy Control & II.*

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III. Policy Control



I got a question from a company. The questions of this overseas company were frank, and the next 2 things.

- 1) The necessity of TQM of the administrative department. (Done by above story.)
- 2) Establishment method, (if TQM is necessary by them).

Here, the question of my friend... **How to introduce and stable TQM in Administrative departments?** ...I introduce my experience with my previous company Sumitomo Wiring Systems (SWS) and a foreign factory.

Factory Management Framework

1) My experience in SWS.

We have (had) the monthly Kaizen suggestion committee.

And we always sighed at the results of the number of proposals by administrative departments which was too low against their target.

Then we have made a very frank dialogue with the representatives of these departments.

2) My experience in (for example) a Mexican factory.

Gemba workers liked the QC-Circle activity. Because Mexican **Gemba** employees also like "thinking, creating and to be evaluated the results and to be praised".

So, how about the office employees? ...Office employees have pride in their work and generally love it and therefore don't wish to share their time with such QC Circle or small group activity.



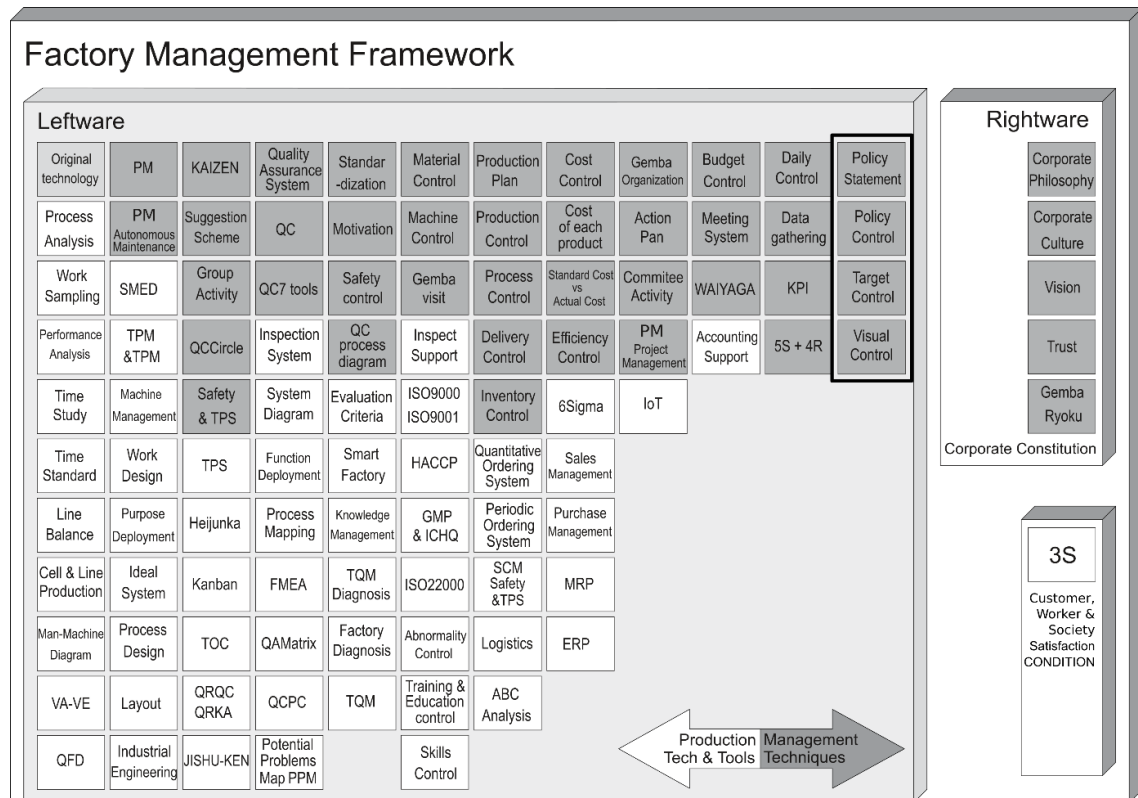
Dialogue with this company's executives and managers.

Sales: Why office department is required to challenge TQM? ...Honestly, I can't make the actual image of TQM activity in my department. Of course, our working process also has a procedure. And I can imagine the necessity of quality improvement in my department. But how?

TQM is necessary to improve product quality, isn't it?

Account: The accounting business is the recording of the movement of money and goods. Manage sales, expenses, etc., obtained by providing products and services. Well, in one word, it is a visualization of the flow of money. The accounting department of our company has an accounting section and a finance section.

It is true that we also make mistakes in the office procedures and also the calculation. And our mistake other words if we make mistake, it is fatal to corporate management. Therefore, it is important the business quality improvement.



But how? ...I know that the production process has, for instance, an inspection system and can use the method of statistical quality control.

But even if there were such mistakes in our office process, there is no influence on the products.

Oh! ...Design engineering and production planning departments are different. Their mistake is fatal. But administrative departments haven't such a concern. We never say that the quality improvement of office work is not necessary, but is necessary. However, the priority of sharing time is lower than the actual job.

...

Production: I think quality improvement is essential for our production line including engineering and production planning. But the HR department has no relation to our products directly. I say there is no direct relation to our quality. Of course, I believe there is an influence on the quality of provided service to our line. But it may be indirect.

Then, when concluding the voice of office Gemba employees, it may be possible to say as next.

1. **Production-Gemba** workers don't like their job relatively and rather they think the work to be hard labor.
2. And they like such QC Circle activities because to be freed fleeting from their hard labor.

3. **Also, one remarkable thing is they aspire to knowledge work of thinking, creating, and to be evaluated the results and being praised and recognized by others.**
4. The above three trends is remarkable for office employees also.
5. **Office-Gemba** employees have pride in their job and like them relatively (including the "right man for the right job"). Therefore, there is no necessity to escape from their job. Then, they like to complete their job rather than such additional activities.
6. It is difficult to use the method of Quality Control by Statistical QC.

Inspection by superior? ...It must be effective, but difficult to do, even to be a sampling inspection. And additionally, recording defects by each person also is difficult and costly. After all, they recognize the necessity of TQM introduction. However, they cannot imagine the methods of TQM introduction or JIM's Office TPM (one of the 8 pillars) introduction.

I believe this is the reason the office employees mind that the TQM activity is other people's affairs. Then, the mind of administrative departments against **Kaizen** or quality improvement was relatively lower than **Production-Gemba**.

So what can we do? ...My suggestion to my friend is to use the top leadership with Policy Control. Policy Control?! ...Policy Control for involving office employees in TQM? ...Yes, it is.

Next, I introduce the true story of this company.

3) A real case of TQM deployment in Office-Gemba



TQM including **Office-Gemba**

The request of this company was the introduction of companywide TQM including **Office-Gemba**. And this company also had the problem of office work performance which was not only the quality but also the work efficiency. They have already succeeded in the quality and efficiency improvement activity in **Production-Gemba** but hasn't in the **Office-Gemba**.

Return to the dialogue with executives and managers of a company... I was asked to make a lecture on TQM by this company. And, as usual, after the lecture to the main employees, I dialogued with the Executives and Managers and listened to their concerns.

—You have already succeeded to improve the production Gemba performance —I asked—. However, why didn't you involve the **Office-Gemba** when you made the special activity with the slogan of TPM?

—We did it —expressed the Executives—, but couldn't understand how to do it. Of course, we prepared the time to learn TPM with a study session. After it, we let them do it on their thought. We believe that they tried an effort to improve their performance including quality issues. However, we found some disappointing facts...

—The activity by **Office-Gemba** was surprisingly made in a low tone. When starting this campaign, the **Office-Gemba** also showed their interest, but soon the tone was going down. The reason was quite clear in their voice. They said next.

- We don't understand what the office TPM is.

- We cannot find the method of Office TPM in the method of **Production-Gemba**.

—Because it is very clear that the operating systems of **Production-Gemba** and **Office-Gemba** are quite different.

—We made some small group activities and found some themes based on the 8 Pillars. We understand some pillars such as **Kaizen**, Quality, and Education & Training. But we cannot find concrete methods for other pillars. Particularly the item of office TPM is not understandable —concluded the Executives.



JIPM 8 Pillars (From TPM-7)

1. *Individual (Kobetsu) Kaizen is explained as "Kobetsu-Kaizen for effective production system".*
2. *Jishu-Hozen is explained as the Establishment of the "Jishu-Hozen system by operator".*
3. *Quality maintenance is explained as the Establishment of a Quality assurance system.*
4. *A planned maintenance system is explained as Creating a planned maintenance system for the maintenance department.*
5. *Creation of a management system for product and machine development.*
6. *Create a system for education and training.*
7. *Creation of an efficient system for management & indirect departments. It is to support activities to reduce and prevent losses at **Production-Gemba** and to conduct similar activities in its own departments.*
8. *Creation of Management system of health and safety and environment.*

—So, you have tried to involve the **Office-Gemba** also by the campaign of (JIPM) TPM —I said—. But unfortunately, the attempt was finished in a fail. But I dare to say that your campaign succeeded, because of the improvement in **Production-Gemba**. However, you weren't satisfied, because of **Office-Gemba's** insufficient involvement.

—Again —I insisted—, I dare to tell you that you didn't need to persist with TPM style for office Gemba improvement.

The Executives answered —Because we made the campaign of TPM introduction and expansion. The main purpose was to introduce the system and thought of TPM.

—Your saying is very strange —I replied—. What was your ultimate aim? ...On that occasion, you didn't care about the slogan of TPM. It doesn't matter if the slogan is TPM or TQM whatever. To say it the other side, the slogan is TPM, but the approach is, for instance, the approach of TQM is also acceptable...

—A slogan is important to unite all activities. But it is acceptable to use any ideas as tactics, even using for instance TQM approach within the slogan of TPM. When looking at the planning paper about the **Office-Gemba** improvement, it is quite clear that the breaking down of the ultimate aim and relation of the tactics was very vague...

—The members of office Gemba expressed their complaints that they cannot understand TPM in the **Office-Gemba**. The success of a campaign is the planning stage quality. If you could make good planning and preparation, the whole process of 60% is done...

—You succeeded in the **Production-Gemba** improvement. And the activity contents are Total Preventive Maintenance based on mainly PM (Preventive maintenance by maintenance department), **Jishu-Hozen** (by operators), and data visualization (by staff)...

—Based on this result, I believe you could improve **Office-Gemba**. But the tactics by TQM should be acceptable. And unfortunately, the campaign was already terminated. And, an additional campaign also is not a good idea. How can you do it? —I finally asked them.

—Well, so far, we had no idea —the Executives recognized.

—Everyone —one executive replied—, I have something to worry about the **Office-Gemba**. This is the delay of DX (Digital transformation). As we know, we planned the 3 years strategy. And in this strategy, there is the item of AI (Artificial intelligence) usage —and he continues...

—**Office-Gemba** improvement by AI usage is a good target, isn't it? ...Also, we issued the policy statement. What do you think about that? —he finally asked everybody when everybody agreed.

—Mr. Kimura. Haven't you any suggestions? —one of the executives asked me.

In my heart, I feel some kind of disappointment. I was confused by the sudden development of such a story. AI utilization? ...What is this deployment?

—Well, if it is possible, please let me see the policy statement —I requested.

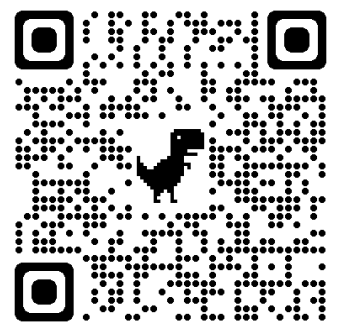
The policy statement was issued 3 years before. I had shown a one-page paper in which they say policy statement. Is this a policy statement? ...No, it was likely a long-term strategy, but likely a long-term target paper.

Anyway, it wasn't an understandable paper. But it was their long-term target. Anyway, I needed to gain time to think about their sudden AI strategy or goal.

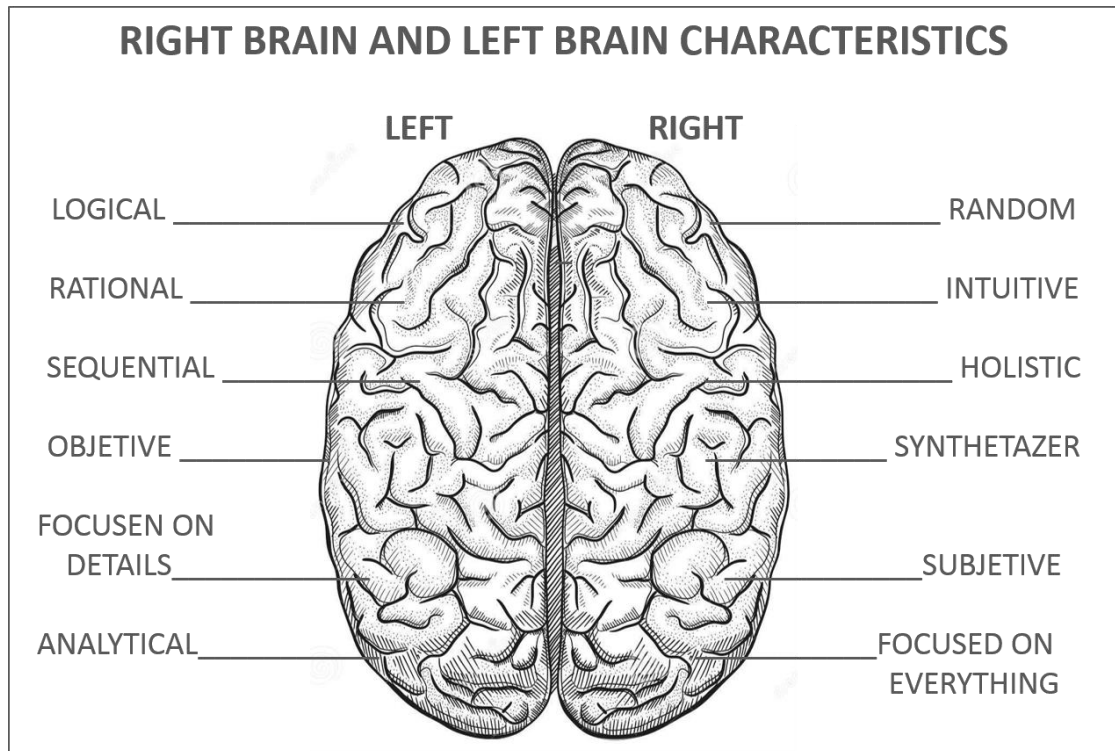
And I asked them to let me see their policy statement driven into a corner. Anyway, I couldn't imagine the AI utilization of **Office-Gemba** performance improvement. I can imagine the AI utilization in **Production-Gemba** or **Office-Gemba**. And if it was a recommendable idea to digitalize the office work first. But when I looked at this policy statement, It seems like some kind of ridiculous words.

For killing the tense ambient I laughed —Ha! ha! ha! ...This is also **Kojiki-no-Okayu** —I said, (Rice porridge of Beggar. The meaning is: Beggar means poor man. Therefore, his porridge is a lot of water but a little rice) —. And, "There are only shouts and no contents." —honestly I felt they were entering an unknown path for me.

—I have seen many Policy Statements or something they named a Policy Statement, on the wall of the company's reception, in the working Gemba like a corporate slogan or one kind of corporate



Factory Management III - Policy Control & III and Policy Statement & Vision



philosophy. But unfortunately, these companies misunderstand the Policy, the Slogan, and the Corporate Philosophy. (Please refer to the factory Management-III³.)

—AI introduction in *Office-Gemba*? —I asked figuratively—. It is an abrupt story for me. However, it may be a good idea to improve *Office-Gemba's* performance. Again —I detailed—, my suggestion is to use the story of the Policy Control.

—And, based on the story (Philosophy, Long-term Strategy, Short-term Strategy, Annual policy, Annual action plan, Implementation & Regular review meeting), the concrete action items are implemented. Because...—I insisted— **Policy and policy control is the executive's highest and strongest leadership.**

Again, they are saying the Policy Statement is like as short-term strategy. No, it wasn't a short-term strategy, but a short-term (3 years) goal with a slogan. And, anyway, they had such a strategy as a goal. And, if it is a short-term goal, they need to deploy it in the annual policy. Thus, it is necessary to re-plan the annual policy contents, if there is no item on AI utilization in the policy statement. But in fact, they had no annual policy.

—I suggest doing Policy Control —I detailed—. Policy Control is one of the strongest leadership by management. And, it is required to instruct the administrative departments. Then the administrative departments will be forced to study the relationship between the current job and AI “spontaneously”.

³ Factory Management-III: <https://archive.org/details/FactoryManagement3PolicyStatementAndVision>
 [Spanish] Gestión de Fábrica-III: <https://archive.org/details/GestinDeFFbrica3LaDeclaracinDeLaPolPticaYLaVision>



AI utilization in office Gemba

It may be true that about 49% of office jobs will be replaced by AI very shortly.

The management is sly and never says the reduction of the number of office workers. But it is also a quite natural way to replace the (for example) routine job with AI.

(The management also is required to change the management way by the appearance of AI in the strategy. I think no strategy hasn't the phrase of AI at present. Not a vision, but a strategy. AI must be an essential tool for corporate management. Personnel assessment? AI can do it. Marketing? Also, it is useful, etc.

And office worker is clever and he/she considers how to escape from the number reduction of office employees.

They are clever and they understand that there is no chance to win against AI if fighting in the AI's specialty field. And, they consider what the areas of weakness of AI are. But AI is tough to beat. Because at present, AI even can write a novel and compose music by his past data (Left Brain).

Again, there is no chance to win AI, if fighting in the Left Brain region. However, AI also has the weak point which is the Right Brain region.

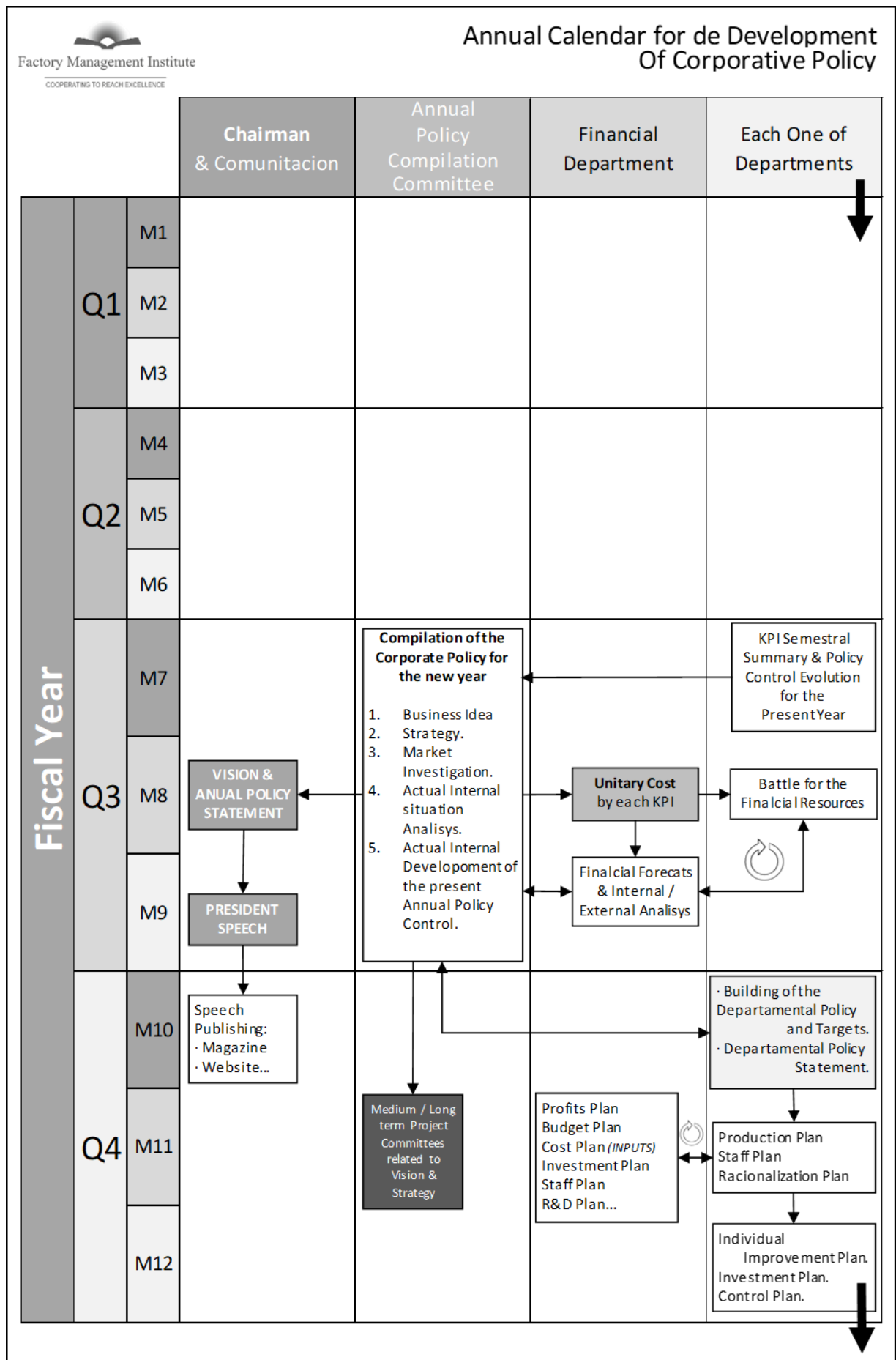
—We do nothing for it so far —expressed the executives—, even though we have such an essential target. Therefore, we need to use this opportunity to facilitate it. —And later they asked me— Mr. Kimura. Could you conduct this activity as part of **Office-Gemba's** improvement?

I tried to pretend to keep quiet and cool —Wait a minute. Please wait... Only 2 things: One is that I'm not an expert in AI, even IoT or ICT. And, second, originally, this dialogue was started with your concern about TQM deployment in **Office-Gemba**. Thus, my suggestion was to use the natural method of Policy Control, rather than the continuation of TPM or re-start of TPM.

—Yes —answered the executives—, we are understanding. However, you told us next: What the ultimate goal is. It is the pursuit of productivity of office Gemba. And, to realize it, any tactics are acceptable based on the flag of TQM introduction even (as you said) policy control. Moreover, the AI utilization process also is no irrelevant to TQM.

—Mhmm... —I hesitated—, but AI utilization is too much leap, isn't it? ...At least, is digitalization better for the office Gemba improvement, isn't it? ...In any case, we including you are not the expert in this field. Therefore, it is not constructive to continue this dialogue. My suggestion is just usage of Policy Control including correct & meaningful long and short-term strategy and annual policy introduction...

—I clearly say that your policy control story is meaningless and out of management. And now is a good time to work on the preparation of the policy control story because you need to prepare the annual policy for next year at that time, 3 months before and now it is 6 months before to next financial year...



—You decide whether the theme of AI is included or not —I detailed—. But when cascading down this AI strategy in annual policy, it is necessary to prepare more concrete ideas...

—Don't you start the preparation, do you? ...My suggestions are two. Firstly, Use of Policy Control to Re-new your style of the incomprehensive strategy paper. And, follow the correct policy control **Kata** (which are philosophy, Long & short-term strategy, and annual policy which is the concrete tactics level). And Secondly, Preparation starts from now.

—6 months before? —Executives asked me—. In another word, now it is only half a year past the current fiscal year. And is it too early, isn't it?

—Yes it is —I answered them—. However, you need to start including employees in the policy control procedure. This step will be continued to the new financial year and moreover. And in parallel, 3 months before the new financial year, please start the preparation of the annual policy. And again, in parallel (before 3 months), please start to prepare the annual action plan which the concrete action items for the annual policy should be included by each department.

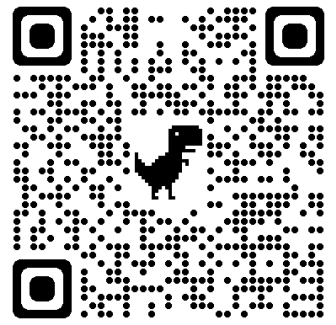
I show my previous company's Newsletter and explain some good points about this. The First one is it is taken in to account to get understanding by anybody. Another consideration is explaining the actual conversations of employees in a story format with photographs.

The interviewers are used, as general employees. (If the interview is necessary to top management.) And of course, the theme is the item that is company wishes to let penetrate or explain. The aim is how getting an understanding from all employees. Therefore, The Company Newsletter is devised as "easy and approachable".

By the way, this company Newsletter is made by the committee named the company Newsletter committee which is constructed of general employees.

The timing to start this committee is before 6 months into a new fiscal year. Because the New Year's annual policy is spoken on the first working day of January by the president.

The contents of the president's speech are greetings, and annual policy (QCDDM - Quality, Cost, Delivery, Development, and management. Then up to the new financial year start (from April), each department is required to make individual annual action plans to realize the annual policy.



Agenda and Times of Policy Control Plan. Google-Drive PNG-file



Company Newsletter with Manga (Cartoon, Comic)

Any company wishes to penetrate and inform the corporate philosophy, Strategy, Annual policy, Company performance, and in-house activity. Thus, a company Newsletter is one the good means.

Sharing company performance and corporate is a matter of interest to employees is essential for management. As with other tools, there are methods of an information board and several events. On the other hand, there is a method of a project.



As I wrote in the Teaching Company⁴, the project method is used easily. However, to use a project style for introducing a new system for instance TPM, the project activity is like "a shot in the arm". My previous company SWS has never had such an approach. It is not the meaning of not using the project method but using it usually. However, before the start of the project, the company will aim are penetrated all employees with such an in-house Newsletter.

To share what our company is thinking and aiming for is a very important step. Now company Newsletter is used for in-house education too.

Next is a good example of a company Newsletter of a Japanese pharmaceutical company which is used for in-house education. Introduced below, but even though it is just a little bit long, it is indeed very interesting.

There is a growing movement among companies to use cartoons to explain medium-term management plans, management philosophies, and internal systems. Manga has been used for external PR (Public Relations) such as introducing government policies and company products, but this is targeted at the inside of the organization. What is the background for all of them?

"Why is it necessary to expand earnings in Asia?" and "How can we create cost synergies?" Young employees who face such problems find answers through their work and interactions with colleagues and connect them to their own work.

⁴ **Teaching company** is a series of a real story about the implementation of TPM and TQM in a medium sized company by Sensei Kimura. They are deployed throughout TPM-7 to TPM-16 Lectures. The beginning of these series is in:

- TPM-7 page 31 One Lecture in a Company [English]:
<https://archive.org/details/TPM7SeisoInJishuHozen/page/n29/mode/2up?view=theater>
- TPM-7 page 31 Una conferencia en la Empresa [Spanish]:
<https://archive.org/details/TPM7SeisoEnJishuHozen/page/n29/mode/2up?view=theater>

*The company has created a **Manga** (cartoon) based on the content of its medium-term plan for three years from 2021 and has published one episode at a time in its in-house newsletter since last summer. All five episodes were completed in one year. "I wanted all employees to understand the medium-term plan and think about why they are in charge of the work they are doing." The executive officer talks about the aim.*

The language and content of the medium-term plan are difficult, and employees are unfamiliar with it. This executive officer was aware of such a problem. To this executive who was worried about how to read it, the president asked, "Why don't you make it into a manga?" I immediately called a professional. "The cost was about 12 million yen because of the large volume, but it was worth it. It was well-read and was well-received by newcomers.

*Other companies use manga internally. One company preached the desirable behavior of a sales clerk in a Manga tailored to the growth story of the part-time sales clerk and released it to employees of franchised stores. Also, a food company irregularly published **Mangas** introducing new businesses in its in-house newsletter.*

*According to the production company that produced the pharmaceutical cartoon, the in-house cartoon appeared about ten years ago in the flow of PR **Mangas** for public offices and local governments. "It was often used to spread the management philosophy. It was the COVID disaster, and the demand for it as an alternative to face-to-face group training and as internal communication has increased. Because anybody can read it anywhere in their spare time, they can use it for work that requires a lot of movement. It's easy for people to read through," said a spokesperson for the company.*

*The Business Promotion Office of Kyoto Seika University, where the **Manga** department is located, also undertakes manga adaptations of local government industry introductions and company histories. Kazuma Yoshimura, a professor of manga research at the same university, said, "It's a genre called 'practical manga,' which puts emphasis on conveying information correctly rather than storytelling. The way it's made is different from the ordinary manga, which seeks to be interesting and moving." says.*

*Taking advantage of comics' ability to break down and convey complex content, in recent years they have also been used in the medical field to explain symptoms of illness and treatment methods. **"The majority of society is made up of people who have grown up reading manga, and manga is no longer just for children. Today, in Japan, many aspects of society are sprinkled with Manga."***

*What is the significance of using in-house comics for a company? "It's an effort to survive in the face of labor shortages and globalization," said Jun Nakahara, a professor of organizational development at Rikkyo University. We have entered an era in which people focus on how they contribute to society through their business when choosing where to work or invest. For this reason, the number of companies that incorporate the perspective of contributing to society and responding to the realization of Sustainable Development Goals (SDGs) in their management philosophy has increased. **"There is no point in just stating a philosophy. It is only when employees are familiar with it that it leads to securing human resources, preventing job turnover, and attracting***



investment. In-house cartoons are a device to deepen understanding within the organization and have them put into practice in their work."

*Actually, **Manga** is one of Japanese culture and used for not only enjoying it but also is used in many cases. For instance, next is the case of child education (about Japanese history).*



"All's peoples participation" by involving all people

Now, my suggestion in this column is not the use the **Mangas** comic, but to use the **Kata** of Policy Control, if you wish to realize a hard task.

This company (dialogue) aimed to improve all working **Gemba** (Office & Production) by TPM introduction. And some successes were realized in the **Production-Gemba**. But he failed it in the **Office-Gemba**. Then he wished to use the item (AI usage) of a long-term strategy.

My suggestion was to use proper **Kata** of Policy Control. And using the Policy Control **Kata** for such a hard task. When following the Kata, "**All people's participation by involving all people**" is essential.

And, in order to involve all people, a company Newsletter is one of good means. Of course, the use of an information board, meeting & dialogue is, also, essential.



My favorite military commander

One of my favorite military commanders (a feudal lord) is Shingen Takeda (1521 ~ 1575).



In Japanese history, the end of the 14 to 15 century is the so-called Sengoku Period (Warring States Period). And the strongest military commander. And his battle record is 72 fights, 49 wins, 3 losses, and 20 draws.

Unfortunately, he died in the middle of the war and, in the middle of the ambition of unification of Japan by illness. If he did not die, the unification of Japan might not be by Hideyoshi Toyotomi.

As I write above, this battle record was admirable. One of the causes of his admirable record was his strategy. The procedure in his strategy was: First. Mollify (appease) the hearts and minds of enemy territory people including Bushi (Samurai) by sending

agents. And then, he took military action. Of course, he made a deep investigation and collect information about the enemy.

Now, you could understand what I wish to tell you, couldn't you? ...In his strategy, there was to try especially hard to seize the hearts of the public. There is his good saying:

人は(wa)城、人は石垣、人は堀、情けは味方、仇は敵なり

- 人 (Hito. People). 城 (Shiro. Castle). 石垣 (Ishigaki. Stone wall).
- 堀 (Hori. Moat) 情け (Nasake. Compassion). 味方 (Mikata. Ally).
- 仇 (Ada. Disservice). 敵 (Teki. Enemy)

*In English, the above wise saying means: **A person is a castle, a person is a stone wall, a person is a moat, compassion is an ally, and a disservice is an enemy.***

There are several versions of this word. Takeda Shingen listened not only to his own ideas but also to the opinions of his subordinates, as he practiced politics in a collegial system. Furthermore, he says:

"If I let the people know that my bows and arrows (weapons) are not for greed, but for the comfort of the peasants, they will wait for my army to advance".



Image of fort.

Castle in center. Huge big fort is surrounded with moat. Shingen was very rare military commander, because he didn't establish such fort.



Image of castle

Lord's residence.
Symbol of power. And
Center of fort.

It is attracting attention as a word that applies especially to corporate management in business, and it is compared to the importance of good human resources and the importance of trusting relationships with employees in order to make a company successful.

It is said that Shingen himself, in order to create a strong group of vassals, placed more importance on a person's power than on his status.

In the business scene, in order to utilize human resources like a castle or stone wall, it is sometimes interpreted that it is important to give trust to employees and not to cause dissatisfaction.

Going back to the speech about this company...

Anyway, if you like, please ignore the next, one because it is a little far from the theme of Policy Control for difficult task realization. I write now this in the context of the dialogue with this company and describing the dialogue with representatives of **Office-Gemba** employees. But before the start of this dialogue, the contents of the dialogue between this company's top managers and me were introduced by the relevant managers, even though I prefer to omit them now.

...

—Of course —some members of the staff admitted—, we knew there is a strategy (AI introduction). But there was no movement. Thus, we recognize the importance of AI usage as a company and as a future trend. But we have no idea how to attack this theme. When starting the campaign of TPM which includes the Office-TPM. But honestly, nobody knows the approach. Then we concluded that TPM is meaningless for office Gemba and to survey another way to improve office Gemba.

—Now we have 2 worries —staff detailed—: One is a sluggish small group activity. As you heard, we have 6 small group activities, but unfortunately, we are at a lost way. And, another is the fear of job loss for their replacement for an AI.

—Wait a minute —managers questioned—. Please feel relieved. You will never lose jobs, even after introducing AI. This is the firm promise by our company and was confirmed in the dialogue. This dialogue was already made before dialogue and Mr. Kimura is the witness. Therefore, please forget this worry.

...

—Everyone —asked one of the members of the staff—, I have read the book about Singularity. And my feeling is I don't want to be in the position in which I'm used by AI. We need to be in the position of utilizing AI.

—Sensei —the same member of the staff asked me—, how can we take the position of utilizing AI? How to win AI?

—I don't know. Such kind of thing is your task. Anyway, there is a word in Sun Tzu's⁵ martial arts as the next sentence: *"If you know him and know yourself, you won't be in danger of hundred battles"...*

—Firstly, you need to know what AI is. Generally, it is said that AI is a huge large storage device. But this understanding may not be correct. Because AI can create new ideas by combining memories. But to input new information, such kind of information is put there by humans. No, it may also not be correct. Because AI also can create new ideas and can memorize them as new memories.

⁵ **Sun Tzu** [eng] was a Chinese military general, strategist, philosopher, and writer who lived during the Eastern Zhou period: https://en.wikipedia.org/wiki/Sun_Tzu
[esp] fue un general, estratega militar y filósofo de la antigua China: https://es.wikipedia.org/wiki/Sun_Tzu

—For instance, AlphaGo⁶. Everyone, do you know this? —I asked them—. Artificial intelligence has triumphed at Go, a game traditionally thought to be the most difficult for a computer to beat a human. And the appearance of AlphaGo went beyond winning or losing a mere competition, became widely known about the usefulness of artificial intelligence, and triggered a global AI boom.

—AlphaGo differs most significantly from previous AI efforts in its application of neural networks (deep learning is included in it). In neural networks, evaluation heuristics are not hard-coded by humans but instead learned by the program itself by playing games against itself tens of millions of times. And, on October 18, 2017, a new Go AI "AlphaGo Zero" that does not use the memory of past game data and does not require big data, and improves skills only by self-playing is announced.

—Mhmm... —some staff member nodded—. He's a formidable opponent, isn't he? And Sensei, What is your suggestion?

—Ha! Ha! Ha! ...Please consider by yourself what his weak point is — I asked them.

—Everyone —one of the staff members questioned—, I know his weak point, which is him to be a machine. And, as you know, or as you have seen in an SF movie (New, Terminator), AI hasn't emotions. This is his weak point.

—Yes —admitted another one—, he is a machine and has no emotions. However, why having no emotions is a weak point?

—Mhmm... —hesitated other staff members.

—It is a good conversation —I encouraged them—. Let us consider this point. Please look at this slide of the master next piece (the next page image). I believe you know this picture which is very famous in the world.

—Yes, this is Pablo Picasso's Guernica —They agreed.

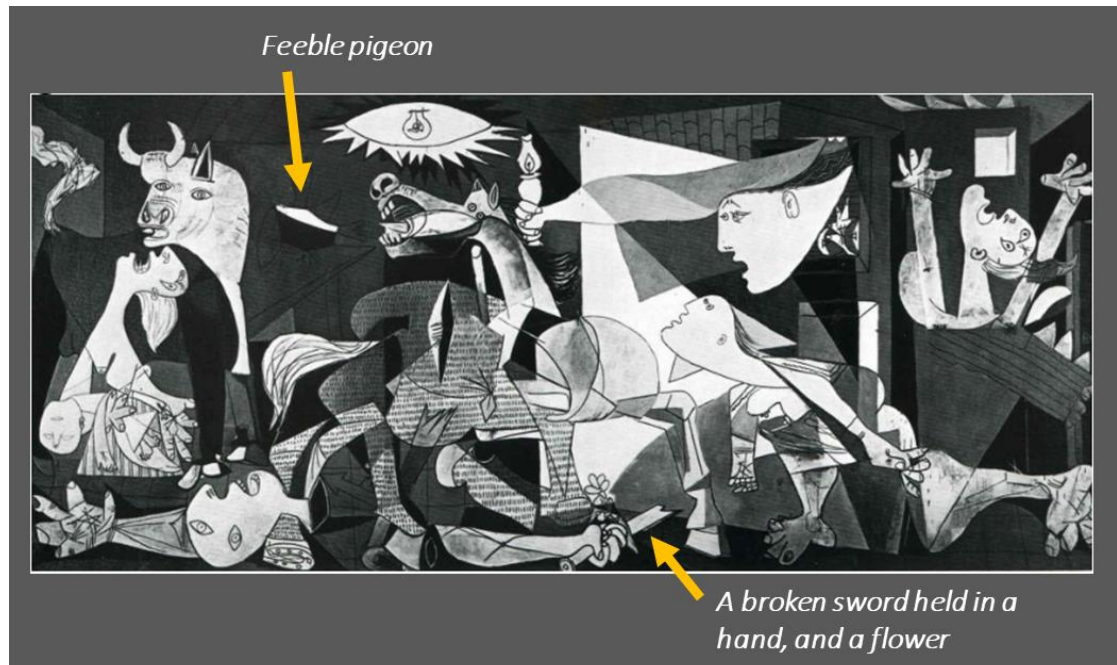
—In this masterpiece, there is a feeble pigeon —and I detailed—, and as you know, the pigeon is the symbol of a peace. And the feeble-looking pigeon shows grief. And the broken sword and a flower show the wish for hope and peace...

—You may not be able to understand this picture. I also cannot understand it. It is difficult to understand not only the above "Guernica" but also other abstract paintings. Why Picasso could draw such a picture? ...I think AI cannot draw such a picture. Of course, he can draw Picasso's taste picture in neural networks. But Picasso's taste picture has no emotion. Yes, he has a very strong weapon such as neural networks. But he cannot create a piece of new information which is the food of the neural network. Why? ...He has a huge big left brain, but no right brain. A human has a combination use of the Right & Left brain hemispheres. This is the human's strong point. Unfortunately, you don't use your brain efficiently. In one theory, human uses only 3% of their brain capacity. Especially, the use of the right brain (which has



www.deepmind.com Alphago

⁶ AlphaGo: [eng] <https://en.wikipedia.org/wiki/AlphaGo> [sp] <https://es.wikipedia.org/wiki/AlphaGo>
<https://www.deepmind.com/research/highlighted-research/alphago>



more than 100 times the capacity of the left brain by picture memory) is very low. As you said, emotion, the right brain is the emotional brain. And the human brain can create new ideas by the catch ball between the Right & Left brain hemispheres.

—Everyone —I call their attention again—, you know FMEA (Failure Mode Effect Analysis), don't you? ...Not much you know the name of it?

Everybody agreed they already know about FMEA⁷. But even everybody agreed I tried to detail it —FMEA is a method of evaluating possible risks during the design stage of the product and the manufacturing process leading up to the completion of the product, and removing the risks.

—It is possible to prevent damage by identifying problems in advance and taking countermeasures. FMEA consists of "Design FMEA" and "Process FMEA" at the work stage. This is a technique to prevent problems by highlighting defects that may occur in the manufacturing process...

—This is very hard intellectual work —I detailed—. I believe that soon (or already) FMEA will be made by AI.

Now I think about FMEA and AI, and I wish to put this matter on the agenda, for the next lectures.

—And, this work will become one of AI's fields of expertise. However— I pointed out—, there is one strict condition. It is to give good, or correct, food, or information, to AI. Perhaps, your future task for using AI is to give him good food.

⁷ FMEA (AIAG & VDA FMEA Handbook): <https://www.aiag.org/quality/automotive-core-tools/fmea>

—Thus, Giving good food? ...yes but, How? —I asked myself—. The condition of good food is Correct, wide assumption, the weighting of information.

—How can we do that? —they asked.

—You need to bring up your brain which you are using only 3%. Particularly the right hemisphere of your brain. You need to bring up the capacity of power of an idea.

—But how Sensei? —They asked just a little confused—. We could understand we need to compete with AI by full capacity use of our brains. Also, we understand having the allowance of brain capacity.

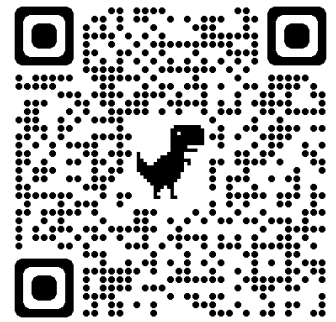
—Is there some training to bring up the capacity of ideas and creativity? —Managers questioned me—. But as you may understand that we are busy and have no time to get the training, if it is a heavy course.

—I heard that you are doing small group activities, don't you? —I asked figuratively because I already knew the answer—. And, such an activity can bring up your creativity. And it is not necessary to have special training, but please continue the small group activities. And I recommend starting the QC Circle activity in parallel.

—As you may have listened —they answered—, our small group activities are sluggish. Thus do you suggest we start QC Circle newly? ...Ok but, Why QC Circle?

—My suggestion is to change from small group activity to QC Circle—. I don't say all, but 1 or 2 groups in the small group activities. Then, when starting QC Circle, I teach additional techniques to bring up creativity. Such activity is the so-called KJ Method⁸ (TQM-3 will describe this method deeply).

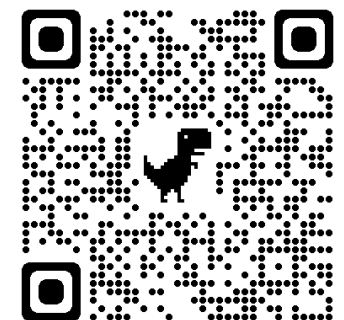
—Well then, how can you (office workers) bring up the Right Brain region which is the capacity for ideas and creativity?



Wikipedia Affinity Diagram



KJ-Method in YouTube

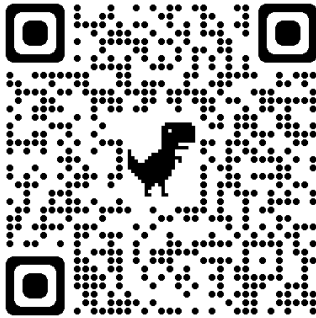


[eng] Sensei Kimura self presentation & KJ-Method – Nonedited

⁸ **Affinity Diagram:** "The affinity diagram is a method of categorizing information created by Japanese anthropologist **Kawakita Jiro** in the 1960s. It is also called the **KJ-Method** or Team Kawakita Jiro (TKJ) through which various concepts are classified into various categories and the elements that are related to each other are grouped.". Source Wikipedia: https://en.wikipedia.org/wiki/Affinity_diagram
Kawakita Jiro: https://en.wikipedia.org/wiki/Jiro_Kawakita
YouTube KJ-Method: <https://youtu.be/PwuPvJlwzCA>
 Sensei Kimura's presentation and KJ-Method explanation: [eng] <https://archive.org/details/to-my-friend-and-kj-method> [sp] <https://archive.org/details/a-mi-amigo-mio-y-metodo-kj>



QC Circle and KJ Method.



[esp] *Presentación del Sensei
Kimura & el Método KJ – No
editada*

I promised to teach KJ Method to this staff group. I will write this teaching of KJ-Method in the next lectures but for now, let me explain the content of the conversation.

—Why QC Circle? ...QC Circle has all essential factors for the formation of ideas & creativity capacity such as chattering with other persons (with consideration of diversity),

- Creating or finding aim;
- Seeing & searching & investigating facts;
- Studying unknown areas;
- Analysis of the facts;
- Creation of ideas;
- Preparation for the presentation and getting an evaluation by others.

—However, it is not necessary to limit the range to quality issues. But it is quite natural to be required the QCS (Quality, Cost, and Service).

—Service? —I asked figuratively—. It is necessary to consider why this (for example) new system is necessary. And, what the ultimate purpose to challenge the theme is? ...Just improvement of job efficiency? —again I asked figuratively—. This answer is acceptable. However, it is necessary to review this theme from the point of view of "Division of duty".

—There was a question about why not the small group activity, but QC Circle style —and I simply answered them as next—. A small group activity is important and effective if you can implement it properly. However, small group activity is to be entrusted by your autonomy. And the steps are the same as the above QC Circle steps. But a small group activity is like an autonomous study group if you ask me. On the other hand, QC Circle has required the result more strongly than small group activity. Of course, QC Circle is under control by the annual action plan.

Anyway, this company's staff decided to start QC Circle involving all existing small groups but didn't want to use the name "QC Circle". It doesn't matter.

One idea by them was RBC. And, what means RBC? ...RBC was "Right Brain Circle". It was like the name of a broadcasting company. And it was dismissed. Another idea was OAA (Overcome AI Activity). Overcome? ...No, no, no. This idea also was dismissed. And the final idea was MAC (Master AI Circle). MAC? (In Japan McDonald's Hamburger is also called MAC).

But they decided to use this name instead of QC Circle. They enjoyed the process of the activity's naming. The naming of an activity is sometimes very important. Because all thought and philosophy are involved in the name. Then, this MA Circle was started. But the procedure is the same as QC Circle.



What is Small group activity? ...What is QC Circle?

Here, I wish to clarify the difference between QC Circle and Small Group Activity. How these are different? ...Firstly, I describe my thought and my teaching about both perspectives.

Small Group Activity

A circle focused on a free theme decided by themselves. And, it is not required the results (But actually, it is required by the company, because in most the case the activity is made in the working time. Also, the results are either doing it or not, and the output is fed back to the personnel appraisal).

The operation is left to them. I introduce the explanation of SGA a little formal by citing a textbook:

“Small group activity is one of the business administration terms and is one of the methods of employee participation in management. A group of a small number of employees is formed in the company and the group is formed. It is operated to conduct joint activities in units.

Small group activities are characterized by the voluntary participation of employees and the fact that no theme is set. A small number of members communicate face-to-face, and mutual activities are carried out continuously. Deepen the demand relationship. The merits of conducting small group activities are improving productivity through the teamwork of employees, finding worth living by reflecting on the opinions of individual employees in management, and looking back on oneself in a small group. There are things such as being able to promote mutual enlightenment”.

QC Circle

*One kind of Small group activity, but the theme is free, and can decide it by themselves. There is organizational involvement. The theme is free but is related to the current job. It is necessary to obey the Kata (**QC Story**) in order to gain results within the scheduled term.*



QC Story (from TPM-16⁹)

In the method of QC Circle, there is QC Story (DMAIC in 6 Sigma? If you like.). It teaches us to follow the problem-solving steps (story).

*The steps of the **QC-Story** are:*

1. Policy confirmation;
2. Final proposition (yours is Profit Recovery by Cost Reduction);
3. Reason for Choosing this Theme and Deciding;
4. Investigation & Understanding of the current condition;
5. Analysis & Diagnosis;
6. Making Countermeasures & Action Plan;



*TPM-16 in factory management
(Oil control - 5)*

⁹ TPM-16: [eng] <https://archive.org/details/tpm-16-oil-control-5>
[sp] https://archive.org/details/@factory_management_institute

7. *Implementation and Confirmation of Effect;*
8. *Standardization and System Stability;*
9. *Review and Confirmation of Problems Remained;*
10. *Necessary Future Plan.*

Again we resume the main theme of my friend's grief and the solution...

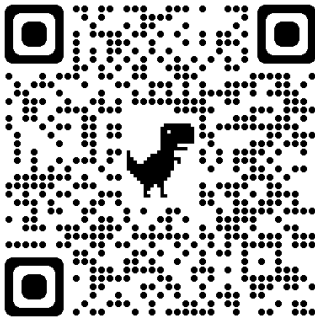
The meaning of Total is true "All people's participation".

The initial stage of TQC started with the quality improvement of production-Gemba. At this stage, the meaning of Total as the indirect department was the participation in the production-Gemba improvement through providing support and wasn't included in the improvement of themselves.

But the 2nd stage of TQC and TQM are different. These require the indirect departments to both support and improvement themselves. And it is possible to provide better support to production-Gemba by the indirect (for instance HR) departments job quality improvement.



Executives' strong leadership

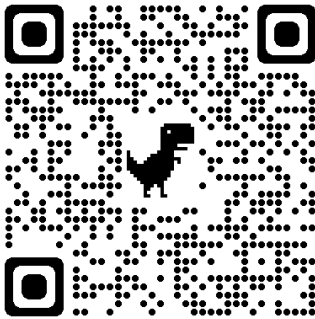


Factory Management III - Policy control and Vision Statement

As my friend pointed out, it is a matter of leadership by the top. He explained a story in which he had a conflict with his colleague managers and mailed me a lamentation. He is a pioneer to expand universal and correct factory management, but sometimes he has such kind of difficulties.

Because administrative departments are very tough to involve in TQM (because of the history and unique subjective) or a factory management style. And, for such hard bedrock breaking through, it is effective to use policy control (Executives' strong leadership).

As the step, please refer to the next lecture: Factory management-III - Policy Control - Page 24 - 2) Steps of penetration¹⁰:



Gestión De Fábrica 3 La Declaración De La Política Y La Visión

2) Steps of penetration.

The penetration of corporate philosophy, vision, and policy is directly linked to corporate profit. And, the penetration requires continuation.

Now is it possible to penetrate the policy statement in all employees in just the Annual Policy Statement ceremony? ...Of course, the answer is "No". And it is not sufficient to orient the working direction in all employees, much more in foreign factories. And, it is necessary to have certain steps which are:

1. Policy statement

¹⁰ **Factory management-III - Policy Control:**

[eng] <https://archive.org/details/FactoryManagement3PolicyStatementAndVision>

[sp] <https://archive.org/details/GestinDeFFbrica3LaDeclaracinDeLaPolPticaYLaVision>

2. *Publication (inhouse Newsletter, logos, posters & banners),*
3. *Departmental policy & speech by managers,*
4. *Morning meetings & speeches by leaders,*
5. *Graphs & charts with targets on visual board.*

Here, I suggest not using project style to introduce TQM in the HR department. But project style is a good means to introduce TQM or TPM. I saw many cases to establish a project team to introduce something of a new system such as TQM or TPM. For instance, the Teaching Company¹¹ also established the project initially. But unfortunately, it failed 6 months later.

Please, understand that a project is like a camphor injection (shot in the arm). Please remember that project is "temporal". And the new system introduced by a project must be sustained. Thus "sustain" is not temporal, but permanent. Therefore, when I supported the introduction of TPM in the Teaching Company, I taught the "Management Kata" to sustain it in parallel.

4) TQM & TQC

Now, I need to write why mixing TQM and TQC does me.

TQM has the characteristic of Top Down including target control. But TQM itself hasn't the tool of bottom-up and diffusion of it. And, TQC has it. And it is QC Circle & small group activities such as spontaneous activities with "all people's participation".

I prepared another suggestion for my friend. It is to do one of the campaigns in parallel with the Policy Control implementation. Because policy control implementation is required a little long term. And, my suggestion is the **Tana Oroshi** activity.



Tana Oroshi

By the way, the Japanese like the word **Tana-Oroshi**. And, **Tana Oroshi** is the meaning of Inventory Taking in English. But the Japanese use this word and say **Hinshitsu-Tana Oroshi** and **Jimu-no-Tana Oroshi**.

- **Hinshitsu**; Quality;

¹¹ **Teaching company** is a series of a real story about the implementation of TPM and TQM in a medium sized company by Sensei Kimura. They are deployed throughout TPM-7 to TPM-16 Lectures. The beginning of these series is in:

- TPM-7 page 31 One Lecture in a Company [English]:
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- TPM-7 page 31 Una conferencia en la Empresa [Spanish]:
<https://archive.org/details/TPM7SeisoEnJishuHozen/page/n29/mode/2up?view=theater>

- **Jimu**; Office work.

Originally, the meaning of Inventory Taking is as next. (Because it is troublesome, I refer to the writing of an SNS.)

“Taking inventory is the process of counting the amount of inventory owned by a business. Taking inventory is needed to ensure that a firm’s inventory records match the physical count, to support materials management, and to ensure that a correct ending inventory balance is reported on its balance sheet. Taking inventory can require that a company cease its normal warehousing and production activities in order to ensure an accurate count, so the count is commonly conducted after hours or on a weekend. This is an especially important activity when a business has a large investment in inventory, such as a retailer, distributor, or manufacturer”.

The meaning or activity of **Hinshitsu Tana Oroshi**: In Japan, it is quite usual to prepare the event of Quality month (in November of every year. Since 1960¹²). And, when implementing this event, many events are prepared.

The events of this month (example of SUMITOMO). The main purpose of Quality Month is:

1. Raise quality awareness of all employees;
2. Thorough customer satisfaction and employee satisfaction;
3. Confirm quality assurance system;
4. Improve the quality of products and services;
5. Improve quality level;
6. Strengthen the constitution of subcontract companies;
7. Development of management policy and confirmation of results.

The schedule is

- August: Quality Month Implementation Guidelines;
- September: Quality Month Plan Announcement, Call for Paper Poster, Slogan, etc.;
- October: Quality Month Goods Purchase & preparation;
- November: Quality Month;
- December: Reflection, for the next year.

Detail of the activities in **Hinshitsu Tana Oroshi** about Quality, Cost, Delivery, and Customer Satisfaction (QCD and CS):

1. Raising the **Q** flag at each workplace;
2. Exhibition of posters and slogans created by the Quality Month Committee;
3. Recruitment of in-house posters and slogans;
4. Call for papers for QC presentations inside and outside the company
5. Preparation of pamphlets, texts, etc. about QC or purchase and distribution of PR texts prepared by the monthly committee;
6. In-house newsletter QC special issue;
7. QC (TQM) diagnosis by the president and department manager;

¹² Usually Accountant period in Japan and USA begins on April. November represents the second month of the second quarter of the accountant exercise. November represents the 7th month of the Accountant period.

8. Implementation of in-house QC competition (department manager/staff, QC circle, small group);
9. My quality (one card displayed by general employees);
10. Implementation of in-house panel discussions, special lectures, and QC circle exchange meetings;
11. Participation in external QC competitions and local special lectures;
12. Questionnaire on QC, customer survey;
13. Awards: Achievements/results for one year or during Quality Month;
14. Joint event with suppliers, delivery destination, and related partner Companies;
15. Quality Month Achievements.

Yes, so many events are implemented. I will write this theme and the detailed method of the implementation later day. And the biggest activity is this ***Hinshitu Tana Oroshi***.

In this event, ***Office-Gemba*** makes the ***Jimu-no-Tana Oroshi*** (Office work Inventory Taking). A company that I taught uses the name "5Ss on the Office work". The special event in Quality month is:

1. A whole inspection of office work against the procedure (working standard, Division of duty)
2. Unnecessary files and procedures (in paper and computer) including hidden files and personal procedures, and past treatment against office work defects.

These items are added to the above "Detail activity" by the name replacement from ***"Hinshitsu Tana Oroshi"*** to ***"Jimu-no-Tana Oroshi"***.

Of course, this Quality inventory-taking and Office work inventory-taking can not be finished the November one month. Therefore, all departments are required to prepare from Augustus. And November is just a confirmation event. (I will write the Quality and Office work inventory taking later)

As the above example, even administrative departments are requested to participate in the TQM events. Thus, the HR department also is required to have some QC Circle groups and/or small groups to improve the department itself.

In that way, my suggestion to my friend is as next:

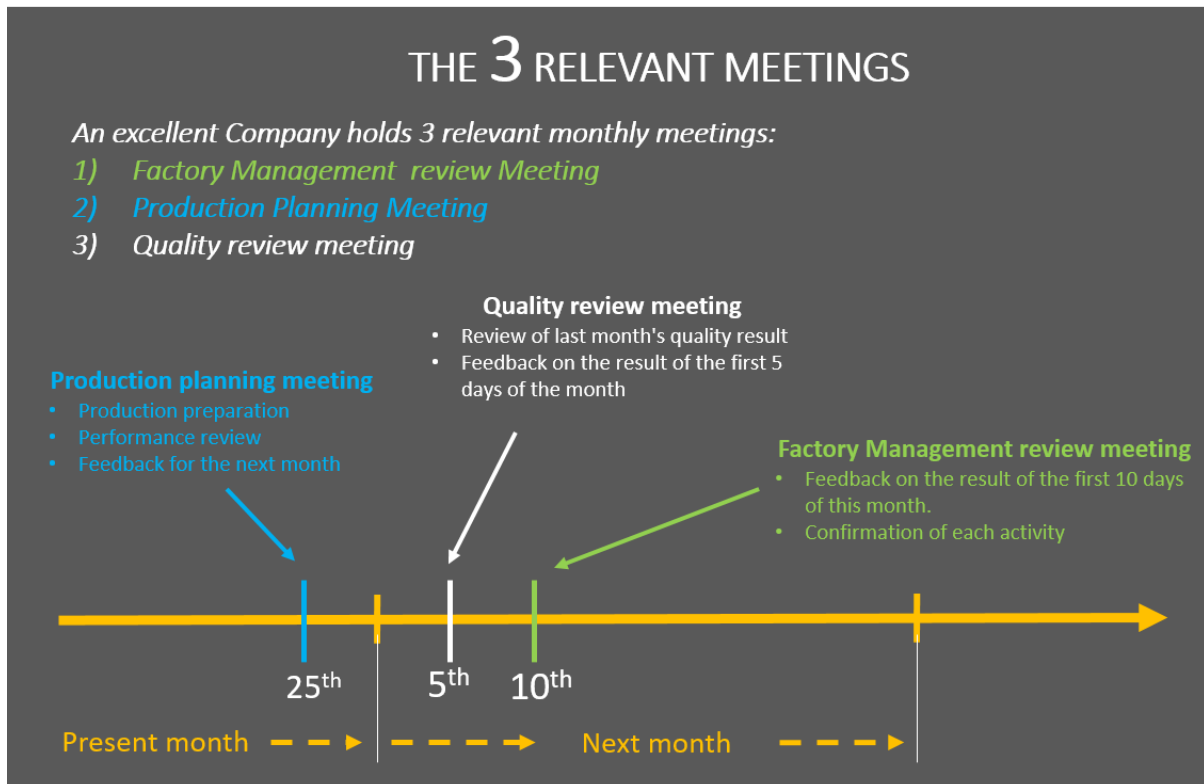
- Suggesting Policy Control to executives.
- Quality-Month.
- ***Tana Oroshi*** activity in the month.

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IV. Cost Reduction – 5¹³

Last time, I explained about **Total-Costing** and **Direct-Costing** and focused on how to interpret the Monthly P/L statement. Thus, how understand the P/L statement? ...In my factory management teaching, there is a description of THREE important monthly meetings.

One is the Factory Management Review meeting. One is the Quality Review meeting. And the last one is the Production Planning meeting.



As you see, the Factory management Review Meeting (Management Team Meeting) is held after the Production Planning Meeting and Quality Review Meeting.

- **Factory Management Review Meeting:** Review of the past result, Check & Action of the current month's activity & next month.
- **Production Planning Meeting:** Decision of Production plan for next month and forecasting 3 months production.
- **Quality Review Meeting:** Review of the past month's result, Check & Action of the current month and next month.

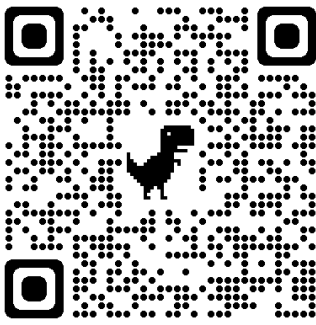
¹³ **Cost reduction** is a series of lectures about the interpretation of different cost regarding to calculate the Profit and Loss statement adequately depending on the activity and policy of the company:

Cost Reduction – 4: [eng] <https://archive.org/details/tpm-16-oil-control-5/page/8/mode/2up>

Cost Reduction – 3: [eng] <https://archive.org/details/tpm-15-cost-reduction-3-and-consultancy-job-continuation>

Cost Reduction – 2: [eng] <https://archive.org/details/tpm-14-clasification-of-cost-and-oiling>

Cost Reduction – 1: [eng] <https://archive.org/details/tpm-13-oil-control-3/mode/2up>



TPM-15 Cost Reduction – 3, and
the Consultancy Job

As I described before, when I was the factory manager of Honda's (wiring harness) Division, this monthly meeting was my biggest headache (because the P/L result was always red). Next, it is the form of a P/L statement from TPM-15¹⁴

During this period, I could learn when to interpret the P/L statement, which is necessary next 2 points.

1) Take care of the Interpretation of Income (Profit) Rate:

$$\text{Profit Rate} = \frac{(26) \text{ Net Profit}}{(1) \text{ Sales Amount}}$$

Classification	Subjects	Remarks	Note
Planned Direct Cost	1 Sales amount & Sales KMH(Kilo Standard Hours)		Actual amount & sales products x Standard H/P
	2 Planned Labour Cost		ΣProduct Sold x SH x Standard Unit Labour Cost
	3 Planned Material Cost		ΣMaterial Used in Sold x Planned Material (Standard) Cost
Direct Cost Modification	4 Planned Marginal Profit	4=1-(2+3)	Marginal Profit=Sales amount-Variable cost
	5 Actual Labour cost		Actual working hours x Planned unit cost ÷ Achieved Efficiency
	6 Planned Labour Cost		Same to 2.
	7 Labour Cost Modification (Labour Efficiency, Planned & Actual%, Repair Cost Quality Defect Ratio, Actual & Plan of Production KMH)	7=5-2	
	8 Actual Material Cost		Actual result of material cost.
	9 Planned Material Cost		Same to 3.
	10 Loss on disposal of waste (Loss rate, Planned & Actual %)		the part of material cost. Actual material scrap loss.
	11 Material Cost Modification	11=8-3	
	12 Direct Cost Modification Total	12=7+11	
	13 Outsourcing Cost (Outsourcing, Planned & Actual KMH)		Treated as Direct Cost and Variable Cost
Actual Other Cost	14 Actual Marginal Profit	14=4-12-13	
	15 Direct Expenses		Other than Outsourcing (Metal mold, Tools, etc.)
	16 Factory (Manufacturing) Overhead		Indirect Material, Indirect Labour and other Indirect Expenses (Machine & Equipment Depreciation)
	17 Gross Profit	17=14-(15+16)	
	18 Selling Expenses		Sales commission, sales promotion cost (advertising cost)
	19 General and administrative expense		Personnel costs (salaries, bonuses, various allowances) for indirect departments, costs for operating the office of indirect departments etc.)
	20 Operating Profit	20=17-(18+19)	
	21 Non-Operating Income		
	22 Non-Operating expense		
	23 Ordinary Profit	23=20+21-22	
	24 Extraordinary Income or Loss		
	25 Tax		
	26 Net Profit	26=23-24-25	

¹⁴ TPM-15: [eng] <https://archive.org/details/tpm-15-cost-reduction-3-and-consultancy-job-continuation>
[sp] <https://archive.org/details/tpm-15-reduccion-de-costes-y-el-trabajo-de-consultoria-continucion>

For instance, next is an example of comparing the next two companies. Which is better? ...As you see, the Profit rate (or profit) is **A > B**.

However, the P/L statement is **B > A**. The cause of **A > B** by Profit Rate is the investment expenses for the future which is **B > A**:

	A Company	B Company
Sales Amount	100	100
Cost of Sales	90	80
P/L	10	20
Investment expenses	1	15
Net Profit	9	5

Cost of Sales: The cost of sales is the accumulated total of all costs used to create a product or service, which has been sold. The cost of sales is a key part of the performance metrics of a company since it measures the ability of an entity to design, source, and manufacture goods at a reasonable cost. The term is most commonly used by retailers.

If comparing just the Profit rate, **A** company is better than **B**. Even though this interpretation is the problem: **A > B**.

The Cost of sales includes Selling and General & administrative expenses. And, both of them include expenditures for the current business and for future businesses (so to speak, investment expenditures). The simple view of Future Expenditure as equal capital expenditure does not hold true in current management.

If you examine each expense item in detail, the Cost of sales includes investment expenditures such as IE strengthening and production productivity improvement, and General & administrative expenses and Selling expenses include investment expenditures such as R/D expenses, marketing expenses, and in-house education expenses. It contains. Non-operating expenses may also include investment expenditures in the form of interest on borrowings.

When looking at the comparison of Investment expenses by **A** company and **B**, **B** is overwhelmingly higher than **A**. Investment **B >> A**. Moreover, the actual size of the amount is difficult to be generally recognized because there is no classification of investment expenditures to be accounted for in this kind of accounting, but the reality is that it is lent to a surprisingly large amount.

Comparing **A** company and **B** mentioned above, Company **B** spends 15 million on R/D expenses, PR expenses, maintenance and development of technology, etc., and Company **A** does not invest in technological innovation, and also in R/D and the market. What if the **A** company weren't spending money and were just pursuing profits from his current business?

Concluding: Company **A** is inferior to Company **B** in a double sense. First of all, in terms of the net productivity of the current business, Company **A** is not as good as Company **B**. This means that Company **A** was already inferior in past decisions and actions. Furthermore, it is not difficult to imagine how much disparity will occur between the two in future growth and development.



Sumitomo meeting rule

I have written about the Sumitomo's meeting rule in somewhere. Even though I explain it again.

- To gather before 5 minutes. (The door is closed 5 minutes after the starting time)
- One page best, 2 pages better.

- *Visible material (graph, charts, relation diagram, picture) than sentences.*
- *Material distribution before the meeting (2 days before)*

The P/L statement is made by the accountant, however, the concept of net profit (in understanding the income statement) has become truly nonsense in the current state of rapid changes in business conditions. Based on this, we consider the rate of return on capital and the rate of return on sales to be the first, and it can be said that the rate of return first principle is truly nonsense in management plans and business evaluations.

As an aside, there are even more serious problems with company **A-type** management. This is because they are dressed to curb investment spending, record excessive profits, and as a result, strive to outflow their equity capital as much as possible. Company A is structurally inferior to Company **B** in the first place and continues to manage to further worsen the asset content.

A business is required to consider the future. On the other hand, a shareholder requires the value of stock in a short period. Thus, it is not possible to say which is correct but the biggest task of a company is the continuation.

The next story is about Japan in recent years, but a mid-sized company that was praised for high profitability and excellent financial structure went bankrupt: The Company was evaluated with high profits and accumulated internal reserves every quarter, but its business performance began to be affected by the delay in reforms and the delay in entering the market. This was the result of focusing solely on increasing retained earnings, rather than turning the profits of the business into investment spending.

Let me introduce a company that contrasts with the above company. Such a company has built an excellent logistics organization on its own for many years and has its own strong sales network. And the point to note is: The Company's policy is to keep profits to a certain percentage of sales, and by controlling during the period, all further profits will be invested in new marketing attempts, research expenses, productivity improvements, and so on.

I write this column on the worldwide situation of COVID (Jun of 2022). As you understand, the worldwide economic condition is damaged very heavily. And in fact, Japanese companies (without weak and small companies) are accumulating retained earnings. I understand the excuse of these companies which they need to prepare the uncertain & vague business circumstances. But this excuse is ridiculous.

Why I'm writing such a thing? ...I have learned the concept of "Internal accumulation (Retained earnings) even, indeed it was very, very long years ago. The concept of internal accumulation is also changing. The deciding factor for future growth and development is the potential energy accumulated in the market, technology, factories, human management ability, etc. of the company. And how much this voltage is raised is the biggest indicator of the degree of an excellent company.

Yes, I learned the concept of excellent company. At present, Japanese companies need to return to the above original concept. And, How about your company?

Now we return to the story of Accounting.

I believe you could understand how you need to interpret the P/L Statement.

Classification	Subjects	Remarks	Note
Planned Direct Cost	1 Sales amount & Sales KMH(Kilo Standard Hours)		Actual amount & sales products x Standard H/P
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	(Outsourcing, Planned & Actual KMH)		
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	24 Extraordinary Income or Loss		
	25 Tax		
	26 Net Profit	26=23-24-25	

Before continuing I need to clarify that I wrote in the past lectures that I don't like the word "Cost Reduction". And also, I wrote rather than the word **Cost Reduction**, I like to use **Cost Improvement**.



Cost to people is an investment.

This story is about the idle talk with Gemba managers through a Zoom conference. 2022.05.

Cost to people is an investment. To what? ...To the future.

When I say so, there was big friction between managers. They then said that

We are required to reduce Gemba production workers to improve efficiency. Of course, it is necessary to improve labor efficiency. After this, the reduction of employees is quite natural.

*Is the labor costs a theme of **Muda** reduction? ...**Muda** must be reduced even though it is the labor cost. However, it is necessary to consider the order:*

- Improving labor efficiency.
- Eliminate labour capacity by the improvement.

P/L
Sales Amount
Manufacturing Cost
Gross Margin
Selling Expenses
General and Administrative Expense
Operating Profit
Non-Operating Income
Non-Operating Expense
Ordinary Profit
Extraordinary income
Extraordinary loss
Tax
Net Profit

- *To use the margin of labour capacity for future.*

This is the concept of "Labour cost is an Investment".

It is easier said than done? ...In my previous company, the margin capacity is separated from the production line. And these margin capacities are used for instance QC Circle, 5Ss implementation capacity, or re-training for other works.

Then I have spoken to them the next —In Japan, the economic situation is like Stagflation (Stagnation + Inflation). The salary doesn't raise, but the cost of living is increasing (even without the influence of the war between Russia and Ukraine). And, on the other hand, the companies (without weak and small companies) are accumulating and retaining earnings...

—At the period 2020, the result of retaining earnings by the corporation reached 5 trillion USD. And the return profit to employees is never sufficient. 5 trillion USD!!! —I remark—. Japan's GDP (Gross Domestic Product) was 5.4 trillion USD.

—5 trillion is 93% of GDP (2021) —I deepened the comparison—. And, it is more than German's GDP (4.3 trillion). It is 10 times more than the GDP of Argentina (0.4 trillion). Such a huge amount of retained earnings was accumulated by the companies (without weak & small companies who make up the majority of companies).

—Retaining earnings accumulation is not a bad thing. But on the other hand, the average wage doesn't increase during 10 years, though accumulating matches a huge amount of retained earnings more than the GDP of a country.

*—Perhaps it is the limit of Capitalism —I remarked—. Then, people reduce their buying. And then, sales amount is stagnating or decreases. Thus, companies seek to gain profit by reducing labor costs in the easiest way such as replacing regular employees with **Haken-Shain** (Temporary employees).*

—Then, the average salary doesn't increase. It is indeed a very bad cycle.

To resolve the situation, the new cabinet held the new concept which is New Capitalism by Prime Minister Kishida.

Initially, he appealed implementation of the good economic cycle by increasing salary & personal income, increasing personal consumption, and acting on corporate activity. But one day, he suddenly changed the above story and appealed the promotion of Gambling (which is to promote the investment to stock by self-responsibility). Actually, personal saving is increasing by the influence of COVID and hesitant buying cause of inflation. I omit the detail of his New Capitalism, but the outline of his policy:

Prime Minister Kishida's overall vision and action plan for "New Capitalism" aims to achieve economic growth while solving social issues such as climate change and aging society with declining birth rates through public-private partnerships, and will focus investment on four areas: "People," "Science and Technology and Innovation," "Start-ups," and "Green and digital."

Among these, the emphasis on investment in People includes providing support for skills development and re-employment and formulating an "Asset Income Doubling Plan" to encourage individuals to shift their financial assets from savings to investments.

The above gambling statement comes from this "Asset Income Doubling Plan". His prospects are to use the sleeping money for the economic cycle. As you also feel it is strange, such Gambling is included in the policy of Investment to People".

I feel all these pieces of stuff are indeed ridiculous.

As the background of 4 areas investments policy, an analysis of overall industries says as below.

The analysis of the current situation of Japanese industries.

- *Weakness of Japanese industry's earning power and international competitiveness. The low productivity in the service industry*
- *A decline in science and technology, including basic research.*
- ***Decreased investment in human resources by companies.***
- *Shareholder-oriented, short-term perspective*
- ***A tendency for corporate management to focus on cost-cutting***
- *Over-competitive market environment*



Investment in people

Unfortunately, Kishida's Invest to People policy is failing. The reason is very simple and easy. Because this policy failed during the period of the Abe cabinet (who also hanged the same policy.). Moreover, Kishida's image of a good economic cycle is to create the resources of industries and wealth distribution to employees and promotion of buying.

During the period of Abe's cabinet, there was the same policy so-called "Trickle-Down" which is the cycle of earning by industries and the profit to be dropping for employees. And the result of this Trickle-down policy is the accumulation of retained earnings by big companies.

The weak & small companies are suffering the cost cut or rejection of prices up in the inflation by big companies. Unfortunately, Kishida's cabinet is choosing a very similar way to Abe's cabinet (who is very famous for the stupid policy so-called Abe-No—Mask; *Abeno Masuku*). And the failure of Kishida's "Invest to People" has been experienced during the period of Abe.

Why Kishida cabinet didn't learn from the past? ...No, it is the wrong word. He has no other way but to follow the past, because of the internal power balance of the Government's ruling party and lack of ideas. He promised investment to people and support for "skill development (and after this) re-employment". But originally, such tasks must be done by individual companies, and (by doing this) the company can gain sustainable corporate growth.

By the way, the population of employees of the big companies is 40%. And the other 60% of employees belong to medium & small corporations.

- Big companies: About 10 thousand corporations (0.3%), 14,000 thousand employees (40%)
- Medium & small companies: About 3,800 thousand (99.7%), 33,500 thousand employees (60%)
(Data of 2012)

I believe big companies can do the "Invest to People" by themselves and connect to the future.

Long years before, I experienced taken along about 60 workers to the Gemba of Sumitomo Electric as the leader. The nominal was "Cross training". But actually, Tokai Electric Wire had excess employees. And he discussed with the parent company Sumitomo Electric and decided to dispatch excess employees to keep the employment.

Actually, this policy affected not only keeping employment but also indeed cross-training through the actual job. This policy was continued for half a year. (The salary was supported by the parent company. But I don't know the rate of burden). During this dispatch, I learned the IE (Industrial Engineering), Basic accounting, and others from Sumitomo teachers.

It is possible to absorb excess people if the company is big. But how about other medium or small companies? ...Tokai Electric Wire was a medium company in the number of employees but poor. However, he despatched the key employees to the parent company for education & training regularly, whether excess capacity or not. The cost of labor is the investment for the future. Some cost is used for of course the production. And the investment must be pursued the efficiency. And it is not the meaning of wage cut, but the meaning of effective use of the capacity.

How treating an excess labor capacity? ...Hopefully, the excess labor should be given the opportunity of education & training through Kaizen activity (such as QC Circle, and small group activity) and cross-training by the company, himself. It is a very useful investment for the future.

The above word is just window dressing (high-sounding talk) for the company that has no capacity. And medium and small companies indeed have no such capacity (money, method, and human resource). Why I'm writing the Factory management Series? ...For medium & small companies. Please learn by yourself. And it is possible because you have your learning materials (production Gemba).

My dream is about some doubts: Cannot big companies open education & training opportunities to such small companies? Or, Cannot the big companies who have abundant retaining earnings spend the fund for small companies the employee education & training? ...Or even, Cannot the government promote this business as a policy?¹⁵

¹⁵ (Editor and Translator – Eduardo L. Garcia – Note): Training for employees is partially or totally subsidized in Spain and in many European Countries at the date of editing this lecture, not only for Medium and Small companies, but also for big companies. For instance, The Netherlands subside with 1.000 Euro each year the cost o training of every active worker. In this way, the worker can chose to spend up to 1.000 Euro in his/her own education and the Netherlands government pay these up to 1.000 Euro to the worker (the excess is not payed by the government). However only a few of the workers uses it because they have not a clear development path. The main problem of all these education initiatives, in my point of view, is for the small and medium companies they cannot properly organize the training and what training can be valuable or necessary. Thus, many Small and Medium companies do not consider the education as a requirement for productivity or cost reduction. It is necessary to design a long term system for employee's education together with the HR department and according to the abilities of each and every worker.

Consequentially, and in my point of view, the point is linked with the renowned "Challenge card" Sensei Koichi Kimura presented in the lectures abut Factory Management, and the **Policy Control (Hoshin Kanri)**. So the solution may be making this special effort to deploy the Policy Control at last and again. And, into this Policy Control there are "Rationalization plans" per departments, which can include workers' training and education

Backing now to Cost Reduction...

2) Understanding using the tendency.

I feel you could understand how to interpret the P/L Statement.

When I was the factory manager, the monthly meeting (Factory Management Review Meeting) was my headache. And when reviewing the activity result and countermeasures, it is required to prepare the key index graphs, based on the rule of "**One page best, 2 pages better, and 3 or more pages worse or worst**", the first page (generally, 4A size) is filled with graphs & charts (by like as Relationship diagram).

The key indexes of the P/L statement also are shown with 3 years tendency graphs. It doesn't matter whether the absolute value is large or small, and the ratio value itself isn't a problem in essence. The point of understanding is what the tendency is.

Even if the current numbers themselves are bad, don't worry if the trend is heading in the right direction, and conversely, if the numbers are good but they have peaked or are on a downward trend, it is a big problem. And since then is necessary to look at the trends, there is no meaning in financial analysis for just one term, and is necessary to prepare **the numerical graph for about 3 years**.

Preparing the monthly graph (of each key index) for this financial term and the past half financial term and continuing to record each quarter term unit financial graph in one graph. One of the important things is to fill in the comment on changes. I say that "*If the graph has no comment (consideration) it has no meaning*".

and special programs, not only for enhancement of the workers, but also for getting polyvalence, deep knowledge, training in QC tools, internal promotions, etc. Policy Control is a continuous improvement activity and each an every year can be done better and better.

For more information, please take a view of the Factory Management Lectures and the book 'The system of Excellence':

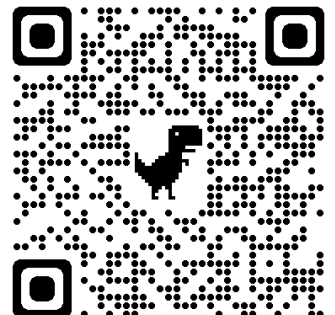
[eng] **The System of Excellence** (Volume I of the Factory Management Encyclopedia): <https://www.amazon.com/dp/B08RW89DMW> / QR-link →

[sp] **El Sistema de la Excelencia** (Volumen I de la enciclopedia de gestión de fábrica): <https://www.amazon.com/dp/B08RSBJMLK>

Factory management-III - Policy Control:

[eng] <https://archive.org/details/FactoryManagement3PolicyStatementAndVision>

[sp] <https://archive.org/details/GestinDeFFbrica3LaDeclaracinDeLaPolPticaYLaVision>





The order of analysis.

Once again let's look at the P/L Statement:

Classification	Subjects	Remarks	Note
Planned Direct Cost	1 Sales amount & Sales KMH(Kilo Standard Hours)		Actual amount & sales products x Standard H/P
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Direct Cost Modification	4 Planned Marginal Profit	4=1-(2+3)	Marginal Profit=Sales amount-Variable cost
	5 Actual Labour cost		Actual working hours x Planned unit cost ÷ Achieved Efficiency Same to 2.
	6 Planned Labour Cost		
	7 Labour Cost Modification (Labour Efficiency, Planned & Actual%, Repair Cost Quality Defect Ratio, Actual & Plan of Production KMH)	7=5-2	Actual result of material cost. Same to 3. the part of material cost. Actual material scrap loss.
	8 Actual Material Cost		
	9 Planned Material Cost		
	10 Loss on disposal of waste (Loss rate, Planned & Actual %)		
	11 Material Cost Modification	11=8-3	
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	25 Tax		
	26 Net Profit	26=23-24-25	

In this statement, there are 26 indexes. Please look at the above figure once again.

When analyzing the condition of a factory with the P/L statements and trend graphs, it is necessary to follow the order which is to look at major issues in detail. And it is never acceptable to see randomly.

When managing a factory, the major issue is, in my opinion, the (14) Actual Marginal Profit.

(14) Actual Marginal Profit

And I believe that the maximization of Actual Marginal Profit is the biggest management task of the factory (of course in the range of business morals).

The trend graph is provided. And, in this graph next trend lines; **Actual Marginal Profit**, **Planned Marginal Profit**, **Sales KMH** (Kilo Man Hour in Standard time). Other lines also are wished to involve in the above graph. But it is recommendable to post the above 3 lines because too many are too complicated to interpret.

Next, we analyze the Direct Cost.

Direct Cost

As you already know,

$$\text{Marginal Profit} = \text{Sales Ammount} - \text{Directo Cost}$$

Here, the Sales Amount is very important as a factory. It is indeed important. However, a factory cannot be involved in it. Therefore, the matter of Sales Amount should be discussed or reviewed in the Production and Sales Planning Meeting. And, if you break this rule, you may experience the deadlock of this Monthly Factory Management Meeting.

My previous company (Sumitomo Wiring Systems) has of course the function of the Sales Department. But this department belonged to the mother company (Sumitomo Electric). It is the so-called "Separation of Manufacturing and Sales".

However, your company may be the style of "Integrated Manufacturing and Sales". But it is the same. Thus, please provide the meeting of Production Planning and Sales Planning.

Next or in parallel.

(7) Labour Cost modification

Of course, it is necessary to analyze the amount in the (Monthly) P/L statement, but also to investigate the trend graph.

In the graph, the next lines are provided.

Production KMH, (5) Actual Labour Cost, (6) Planned Labour Cost, and Labour Efficiency.

As you understand, the gap between planned cost and actual labor cost is analyzed by the labor efficiency graph. Of course, the line of labor efficiency must have the comment of why bring up or down. Labour Cost Modification itself, Planned & Actual Labour Cost must have the comment.

(8) Material Cost Modification.

Again, it is the same as above. Thus, it is necessary to analyze the amount in the P/L statement, but also to investigate the trend graph. And, in the graph, the next lines are provided: Production KMH, (8) Actual Material Cost, (9) Planned Material Cost. Moreover the next lines: Amount of Repair Cost, Quality Defect Ratio, Amount of Loss on Disposal of waste, Planned & Actual Loss rate, and Inventory Turnover rate.

As you understand, the gap between planned cost and actual labor cost is analyzed by the labor efficiency graph. Of course, the line of labor efficiency must have the comment of why bring up or down. Labour Cost Modification itself, Planned & Actual Labour Costs must have, also, been commented.

It is too many to write these trends in one graph. The purpose of trend lines in one graph is for analysing the causes. These graphs are written in some graphs separately. But please don't forget "One page is best".

Therefore, I recommend using the Relationship Diagram with arrow marks.

(13) Outsourcing Cost.

One graph: Trend graph of Production KMH, Planned & Actual Outsourcing KMH, and Planned & Actual Amount of Outsourcing Cost. I rather prefer to omit more details.

(15) Direct Expenses

In one graph: Production KMH and Actual Amount. And a detailed report is attached.

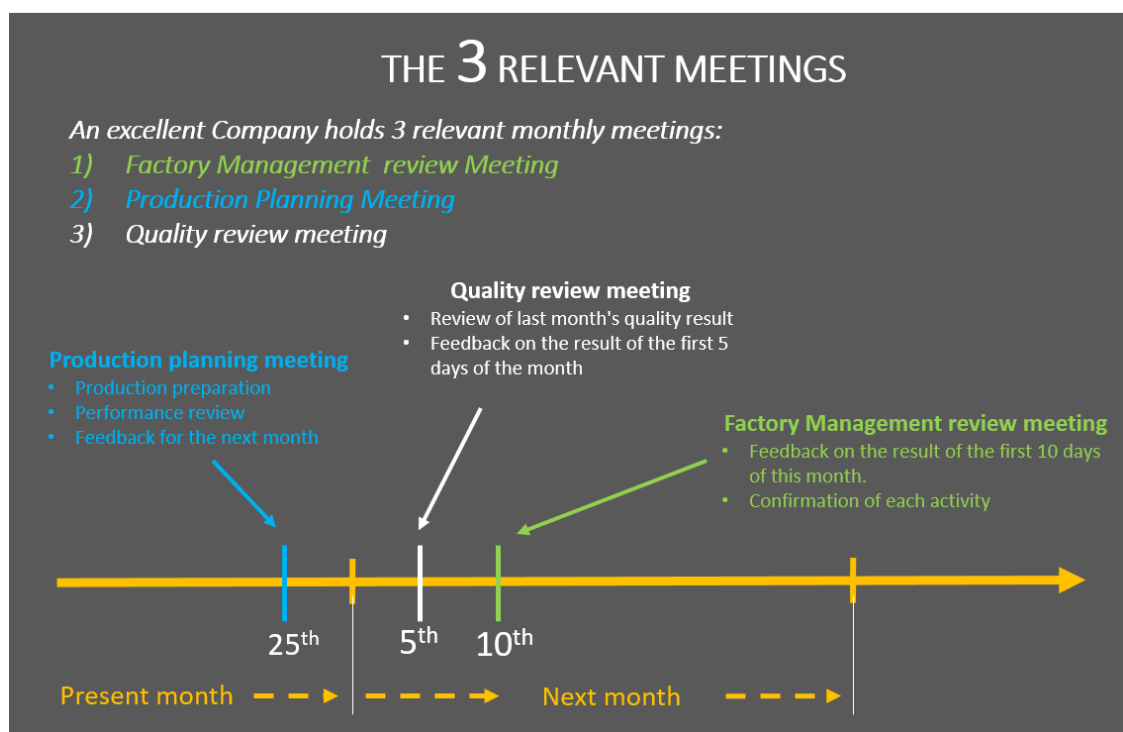
(16) Factory (Manufacturing) Overhead.

Same to above...

Items (15) and (16) are important. But these amounts are very smaller than the items of Direct Cost (Labour and material) amount.

As above, the important thing is to analyze or review the causes of the result of bring-up or down by looking at the trends graphs and comparing the planned (budget and profit plan) and actual. And, based on this analysis, it is required to confirm the countermeasures for this month and next month.

Others (17) ~ (26) are of course important as a company. However, it is difficult and meaningless to discuss involving factory managers. However, it is wrong to express "No meaning". Of course, it is important to be understood the situation of the company by anybody. But, once again, the most priority matter in factory management is the maximization of Marginal Profit.



Because... (18) Selling Expenses, (19) General & Administrative Expenses, (21) Non-Operating Income or (22) Expenses, (24) Extraordinary Income or Loss, and (25) Tax cannot be controllable by factory management.

Consequently, to understand the company's situation, it is necessary to look at what the Interest rate and Bill discount fee for sales are, what is the Rate of earnings on total capital, what is the Turnover of total capital, and so on. However, these are also difficult to discuss in the Monthly Factory Management Meeting.

A factory is required to contribute to the company's P/L through a production ineffective method. And the important matter is "Now", and whether the "Now situation" is going under planned or not.

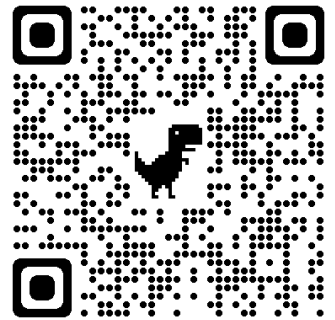
On the other hand, I wrote the "Period Cost" in TQM-1¹⁶.

Period Cost

Period costs are costs that correspond directly to sales in the period in which they are incurred. Typically, Selling, General & Administrative Expenses are treated as Period costs.

And when making a business activity such as sales activity, it is meaningless to look at the Operating income which is involved the Period Cost but is necessary to look at the current competence including production cost and sales price in Marginal profit.

Therefore, it is not suitable to use Operating income for factory management and sales activity.



TQM-1 Prologue & What is TQM.

¹⁶ TQM 1 - Prologue and, What is TQM: <https://archive.org/details/tqm-1-prologue-and-what-is-tqm>

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V. Teaching Company ¹⁷

That was a surprise. When I was in my room at the hotel, the reception conveyed a telephone. The person on the telephone was the Managing Director of the Teaching Company. And he told me his wish to see me. What a surprise, I thought, because it was indeed a surprise.

After visiting and finishing the job at another country's company, I came back to this country for the next company visit. It was passed 5 months after the meeting with him and the phantom president in the airport. Then, 4 days later, Managing Director visited me at my hotel. And, the purpose of his visit is the re-contract of my teaching. The meeting timing was bad because I already drunk some alcohol and was too generous. Anyway, I ordered additional whiskey for him and also for me because actually, he is also a drinker.

After some chattering, I asked about the situation of his company and his job. Thus, he explained the factory situation feebly in some papers. I feel in my heart, he looked like becoming, to be honest by drinking. I thought it is good and may possible to hear the truth in such a current situation. He was bearish and the reason was that all my prospects were correct. Indeed, the sales amount was gradually declining. The trend of turnover rate recovered once was turned to ramp up, and the project team activity continued but stagnated. Anyway, the situation was gradually declining and finally, he asked me —Sensei, May I ask you about the re-contract for teaching?

Hearing that was a surprise, not because of the requirement, but for the qualification, he gave to me as a **Sensei**. Thus, again I could get the promotion as called **Sensei**. But it is really vain.

—By the way —and I asked him—, How about the situation of the stupid policy of "Prohibition of receiving an order in red"?

He glowered at me through his glasses —Of course, it was continued and will be continued. And, my headquarter decided on the new policy. It is the increase in Sales Profit Rate. This is one part of the strategy of "Return on Assets Improvement".



Sales Profit Rate and Return on Capital (ROC)

$$\text{Return on Capital} = \frac{(26) \text{ Net Profit}}{\text{Total Capital}} =$$

¹⁷ **Teaching company** is a series of a real story about the implementation of TPM and TQM in a medium sized company by Sensei Kimura. They are deployed throughout TPM-7 to TPM-16 and TQM-1 lectures. The beginning of these series is in:

- TPM-7 page 31 One Lecture in a Company [English]:
<https://archive.org/details/TPM7SeisoInJishuHozen/page/n29/mode/2up?view=theater>
- Previous lecture in TQM-1: <https://archive.org/details/tqm-1-prologue-and-what-is-tqm>
- TPM-7 page 31 Una conferencia en la Empresa [Spanish]:
<https://archive.org/details/TPM7SeisoEnJishuHozen/page/n29/mode/2up?view=theater>
- Previous Lecture in: <https://archive.org/details/tqm-1-prologue-and-what-is-tqm>

$$= \frac{(26) \text{Net Profit} / (1) \text{Sales amount}}{(1) \text{Sales amount} / \text{Total Capital}} =$$

$$\text{ROC} = \text{Sales Profit Rate} \times \text{Total Capital Turnover}$$

I will describe ROC deeply in the next TQM-3.

In my heart, I felt "Oh dear! An additional difficult thing was brought in factory management. Anyway, it is not my matter". —I see —I admitted—. Thus, I confirm that you wish to re-contract my teaching and at this time the theme is TQM. Am I right? — I asked finally receiving an immediate answer as a slight nod from the Managing Director.

—Still, I cannot understand why you wish to re-contract my teaching. Moreover, the teaching is TQM at this time. Of course, Quality improvement through TQM activity is essential for the continuation of a business and there is the effect of cost reduction (**Muda** reduction). However, your new policy is ROC improvement. And to improve ROC we need to consider the improvement (increase) of Net Profit and/or improvement (decrease) of Total Capital —and I continued.

—In this way, in order to improve the Net Profit, there are 2 ways which are an Increase in Sales amount and Cost (**Muda**) reduction. And to improve (decrease) Total Capital, there are 2 ways, which are possible to implement as a factory. The first one is to sell unnecessary fixed assets (unnecessary equipment) or to change to leasing:

$$\text{Capital} = \text{Assest} - \text{Debt}$$

—Remember that of the "Assets", the money you can actually spend is the "Capital". When this "Capital" is exhausted, the business cannot be established. Thus, the second one is to improve Inventory turnover to minimize the inventory. You are required to cascade the corporate policy into your factory.

I felt it was like "Teaching fish to swim" for him. But it was necessary because it was important how to convey the top policy and replace it with the factory management themes. But even so, he wasn't feeling well that day.

—By the way, Are the **Katas** of factory management, which I taught, and are Management Team and regular review meetings, necessary indexes, data gathering, **Gemba** committees, etc., being kept?

—Of course, yes. —confirmed the Managing Director—. But my concern is the **Gemba**.

In the meantime, he was telling me "my concern is the **Gemba**", I was thinking "actually my concern is you". The situation in the company was getting stagnated. The Kaizen activity based on QC Circle was getting stuck in a rut and sluggish. They had a deadlock to find the quality improvement theme and the implementation, even though finding the solution. Although, the 5Ss and Safety activity is continuing well.

—I see —I tried to be polite—. It might be good. Maintaining **Kata** (the step of "Shu") requires time. You told me about the concern of QC Circle. And, my view is that it is caused by the sustaining of the

manager's mind. **Gemba Kaizen** is not like a temporal festival and campfire, but the fire of the hearth. Somebody needs to keep it carefully.

I thought I was wrong —Somebody? ...by the "Organization" —I rectified—. And it is your task. You require managers to discuss and find solutions. They are competent. And I believe they can find the way what they need to do...

—TQM? You can do it yourself, right? —I asked, and in the meantime, he showed a face that actually showed doubt—. Also, it is good timing for additional campaigns after that TPM introduction activity. I taught TPM through the activities of PM (Preventive Maintenance) and Total involvement by the **Katas**...

I think the order was the contrary. And, the order must be Factory Management by Kata first and secondly TQM, and thirdly TPM ("Total" Preventive Maintenance). Anyway, I taught Factory management and TPM.

—What is your concern? —I finally asked him.

—My concern is the result as a company. The business achievement is not good and, moreover, is stagnating or declining.

I imagined so. Thus, the sales expansion and sales amount didn't increase.

—I'm sorry, but I don't think that it is a corrective answer to implement TQM activity. It is quite true that quality improvement is useful to reduce cost by reducing **Muda** such quality cost and also is a good element for sales activity. But I think it is not possible to resolve your concern such sales amount and expansion...

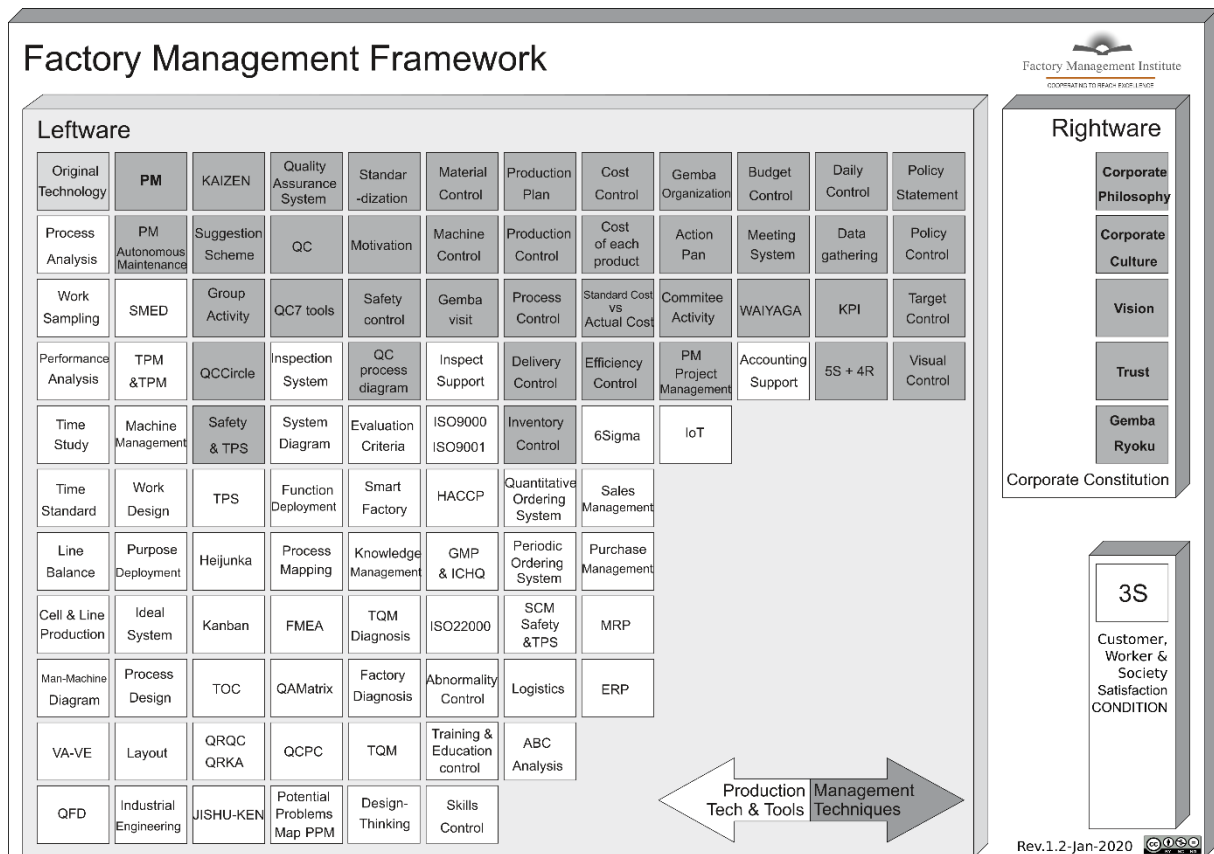
—When looking at your company's core competence from R/D, Production, and Sales, and your R&D has no serious problem, Production also has the capacity. But unfortunately, Production is not sellable. And your company is very unique. Because still, you keep the stupid policy which disturbs the sales competence. When diagnosing a company, it is necessary to see in multiple dimensions —and I detailed...

—One is such a core competence in the market. Another one is a strategy for future growth. And, another one is Factory Management capacity. As you understand in factory management, TQM, TPM, Kaizen, and factory management itself such as meeting systems, Index control by data gathering and use, **Gemba-committee**, Employee Engagement, etc. are involved...

—And my professional field is factory management. Here —I insisted—, you required me the re-contract and TQM teaching. But I don't understand what is your ultimate aim you what to achieve by re-contract me and what do you want from my teaching —I admitted—. I recognize that I already taught necessary **Kata** which is also a useful and basic condition to introduce any "Total" such as TQM, TPM, **Kaizen**, and even TPS and also assets turnover improvement. Of course, and repeatedly I tell you that **Kata** must follow the step of **Shu**, **Ha**, and **Ri**¹⁸ in the long term and experiences...

¹⁸ **Shu**, **Ha**, and **Ri** (守、破、離): Certification scale in the Factory Management Institute, WSFDP: <http://ia803101.us.archive.org/17/items/WFSDPRoadMap/WFSDP%20RoadMap.png>

- **Shu** (守): Shu means to keep. Keeping **Kata**, which is taught by the teacher. Anyway, it is required to master the **Kata** which is like a Judo form. This step is still training level.



—Mr. Managing Director I never refuse your invitation stubbornly. However, I don't want that condition at the time of TPM introduction. At that time, you strongly required me to introduce Total "Productive" Maintenance (or "Management"). But I refused it because JIPM TPM was so stupid. Secondly, I could understand that your ultimate goal was to recover the profit by reducing Muda in the factory.

—Then, I declared that my teaching is Total Preventive Maintenance and through it, teaching factory management Kata for the future. But it is also a fact that there were unnecessary conflicts between my teaching and the management team. It was indeed meaningless...

—Again, what is your wish Mr. Managing Director? TQM introduction? —I asked figuratively and I answered myself—. You do it by yourself. Again, is it the profit recovery? If it is, you already know one of the solutions, which is to stop the stupid policy. There are two ways to increase your recurring profit. The first one is Increase sales and the second one is to Reduce costs...

—However, companies with a deteriorating rate of return on total capital such as your company will actually have little room to cut costs...

—No, it is wrong —I rectified it—. There is some room for Inventory turnover improvement and unnecessary machine treatment. But unfortunately, it may not be the ultimate solution for your top

- **Ha (破)**: Ha means to break. After keeping **Kata** taught, the next step is to analyze and study by himself and create better **Kata**.
- **Ri (離)**: Ri means to leave. To understand the teacher's Kata and his own. **Kata** deeply. And, free from the teacher's **Kata** and his own **Kata** and break new ground including the philosophy.

policy, but one of the important factors. Then, another way to increase Ordinary income is to increase sales...

—However, in order to increase sales, it is common to increase sales volume by discounting, etc., but in this case, ordinary income may actually decrease —and I continued.

—If you rely too much on discounts, you will be busy but not profitable, so you need to improve your marketing ability and make efforts to increase your sales power so that you do not have to sell at unreasonable discounts.

—Your Sales department considered this point by the Break-Even-Point Diagram and the market diagnosis. And they were trying this sales promotion, even breaking the policy of "Prohibition of receiving the order in red".

—Yes, it is —he admitted—. Our ultimate goal is to recover profit. But Kimura-san again TQM, TQM also has the such effect of cost reduction. Am I right? —eventually he asked me.

I showed a face of frustration because I was indeed just a little irritated, yes a little irritating. —Yes, you are —I answered, and then I deepened into the reason—. TQM or quality improvement has the effects of **Muda** reduction such as quality cost (inspection cost, inspection equipment, the repair cost of labor & material, quality claim treatment cost, etc., and also, market reputation)...

—It is true that endless quality improvement activity is essential for a company. However, for your wish and final goal, the TQM is like as prescribing vitamins and cold medicine for the patient of stomach ache...

—It is necessary to improve quality for internal **Muda** reduction and is of course useful. However, when looking at your accounting data and also considering your new policy, it is true that the internal **Muda** reduction is never enough.

—Today, you look like you not to be fine —I confess—. I guess that the cause is your plan in the deadlock. Your plan is still the dramatic sales expansion with the stupid policy. Thus, according to the sales & engineering market survey, your new products series have the technical competitiveness. But unfortunately, these excellent products series are too high price. I don't know the current competitiveness of this product series in the current market, because my image is already 5 or 6 months old. Maybe, you already lost the timing and chance to dominate the market.

—You told me the word of stupid policy repeatedly —he replied—. Why it is stupid? Is the policy "Prohibition of order in red" so stupid? I just obey the common sense of corporate management. It is quite natural to take such a policy for getting profit, isn't it?

—Common sense? In Japan, there is the next word: Japanese common sense is insane in the world —I answered in the meantime I thought, indeed it is a fact there is this saying in Japan—. And also, there is the next word: Accounting's common sense is insane in a factory —but in this case, I was lying, because such a saying does not exist.

—Anyway, Mr. Managing Director —I tried to explain the first concept deeply—. There is no more ambiguous word than so-called common sense. Your common sense is the common sense in just the world of Accounting...

—When making a factory management meeting, which the sales department and a person of accounting attended, at my previous company, we diagnosed the trends of key indexes by graphs and charts and also monthly P/L statement. And the salesperson could understand the sales (price)

competitiveness by the factory situation. Our discussion point is not the Operating profit, which includes the Period cost, but the improvement of Marginal profit. Our important discussing point is not the Period cost, which is the accumulation of past costs in period result, but the current cost...

—Mr. Managing Director —I expressed just a little disappointment—, you are leading your company to destruction. I saw you're provided with accounting materials. And the fact is the gradually declining of sales amount.

Actually, I have taught the management team the importance of looking at the trends of key indexes as a factory management **Kata**.

—On the other hand —I detailed—, there is no big change in organizational aspects. There was a little reduction in the number of direct laborers. But other General & Administrative Expenses were no change. Once upon a time, you explained your company's strategy, which is to keep the factory capacity for future sales expansion...

—Mr. Managing Director, I believe in your capacity as an accountant. And, my previous company also is keeping the unwritten rule that a top person should be changed alternately between Accounting and Technical fields to keep the balance.



Facts and Truth.

I somewhere I wrote: "An engineer talks about dreams; and an Accountant talks about numbers."

For corporate management both are important. But as you understand, it is necessary to consider the balance. And another contrast is: "Engineer understands the facts by actual occurrence. And, Accountant understands the facts with through numbers."

He (Managing Director) required me the teaching TQM. Still, I didn't understand what his will was. No, probably I had understood his wish, which was to complete the new policy (ROC; Rate on Total Capital).

By the way, TQM requires seeing "facts", but not "truth". Thus, to see "facts" is so difficult. Therefore, is necessary the training.

But, what means "Training to see the facts"? ...For instance, "dimension defect" occurred.

The "fact" is just one and is the occurrence of a "dimension defect". And it is required to pursue the causes by (for instance) 5Whys. And, the essential attitude is to seek and collect "facts".

One "original fact" is the dimension defect occurred. And, to analyze the causes, it is necessary to find all surrounding facts such as machine speed, degree of wear, variation of the material, temperature, surrounding vibration, etc. And for helping this survey, the Fish-bone Diagram provides the basic branch by 5M elements (Man, Machine, Material, Money, and Method) for beginner or low-level participants.

I will describe more detail in TQM. But anyway, there is a lack of branch elements for seeing and gathering surrounding facts. And 5Why and Fish-Bone are the same.

When teaching defect cause analysis, I teach to not pursue truth but pursue facts.

Determine if it is a "fact" or a "truth". Thus, "Facts" and "truths" have similar meanings, but their nuances are different. "Fact" refers to what actually happened, and "truth" contains a person's interpretation of that matter. "Facts" are objective, while "truths" are subjective.

It is a very difficult story to receive "facts" as "facts". Because, even if it is a "fact", for example, the moment you hear it from a person, the subjectivity will be included, and since the listener is also a person, the subjectivity will be included. In that sense, some training is required to distinguish between "facts" and "truths."

Most of the failures of 5Wy, Fish-Bone is to failure to pursue just facts. And, the essential attitude is never to pursue a subjective idea. In this way, an engineer is trained such behavior unknowingly. But accounting is different, but an accounting person is trained to look at the facts through numbers.

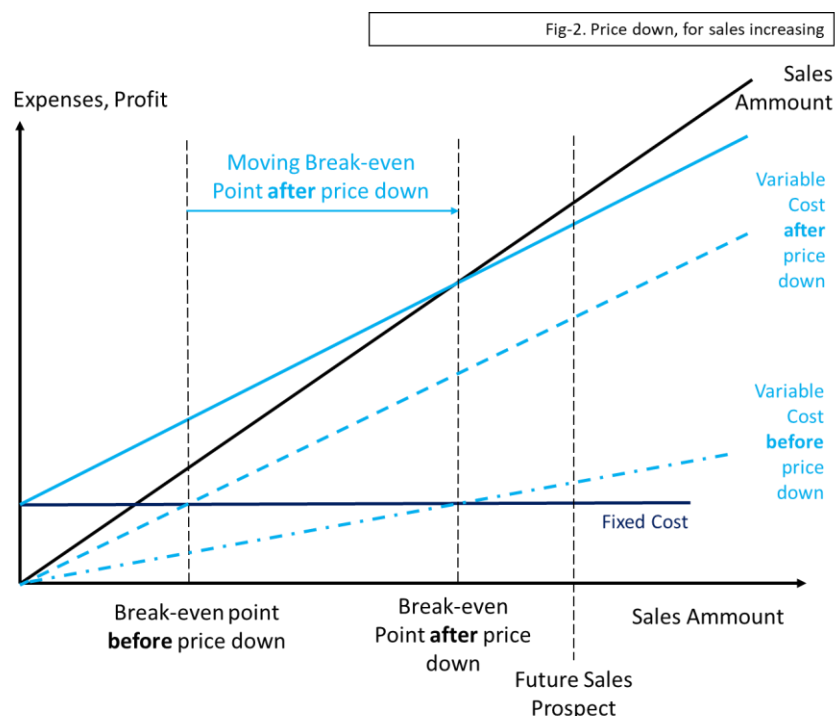
I'm an engineer basically. Therefore, I look at current phenomena by the facts of actual occurrence.

Going back to the dialogue with this Managing Director.

—It is so simple — I summarized—. The objective facts are, first, there is the market of the products. (A half year before.) Second, Production capacity is sufficient, but, the third is it is not sellable and the cause is the price.

—On the other hand, you look at these facts through numbers. And you say as next —I detailed—. The company's management must be taken care of future growth, and it is necessary to keep Operating profit. Consequentially, both points of view are of course important. However, without the present, there is no future...

—Mr. Managing Director, I suggest you discuss with the members of the Sales department and Accounting manager based on the Break-Even-Point Diagram which they made.



—You wish to recover or improve the ROC (Return on Capital):

$$\text{Return on Capital} = \frac{\text{26) Net Profit}}{\text{Total Capital}}$$

$$= \frac{\frac{\text{(26) Net Profit}}{\text{(1) Sales amount}}}{\text{Total Capital}} =$$

$$= \text{Sales Profit Rate} \times \text{Total Capital Turnover}$$

—To improve it, it is required to improve the Sales Profit Rate and Total Capital Turnover. And to improve Sales Profit Rate, it is necessary to improve the Profit Rate against Sales Amount...

—Therefore, you wish to keep the stupid policy "Prohibition of receiving an Order in red". However, one of the serious facts is "Not sellable". You know this fact already. And therefore, you are troubled...

—Another truth is that cost recovery will be possible even in planned discount price by getting production volume.

(This story is continued to next Cost Control – 6).

VI. Next Lecture.

In the next lecture, I continue the Cost control – 6 in Teaching Company, QC Circle, and the KJ-Method.

Koichi Kimura CC4 – November-2022.

Factory Management Institute